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ABSTRACT

The first of the document's major components is the report of the Cleveland three-year career development program. Intended to bridge the gap between school and earning a living for students in an urban poverty area, the program begins in elementary school and continues through high school. Eight goals and related performance objectives were delineated. The program included occupational information and orientation and career exploration. Among the program's accomplishments were the development of sound slides and a curricula guide and the use of both the cluster concept and discipline concept in the program presentation. Appendixes include an annotated bibliography and a list of instruments used. The second major component is the 76-page report of the final evaluation committee. It concludes that the program results in significantly greater occupational knowledge for its students but was not successful in imparting more positive attitudes towards work related concepts or expanding expressed job preferences. The third major component describes the one-year participation by Catholic schools at the intermediate school level. In 117 pages, the program rationale and objectives are defined, and lesson plans used by grades 4-6 are outlined. (AG)

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FINAL REPORT

PROJECT No. 0-361-0154

CONTRACT No. OEC-0-71-0585(361)

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Developmental Vocational Education Program
A "5 to 12" Model for an Urban School District

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

William I. Sims
Cleveland City School District
1380 East Sixth Street
Cleveland, Ohio 44114

AUGUST 1973

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Final Report

Project No. 0-361-0154
Contract No. OEC-0-71-0585 (361)

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A "5 to 12" Model for an Urban School District

Exemplary Project in Vocational Education
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The project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects and Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent Official Office of Education position of policy.

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SUMMARY

Covering the interval from the beginning of the Developmental Vocational Education Program September 1, 1970, through the termination of the program on August 31, 1973, this report serves as the final report of the project.

The overall goal of the program was to bridge the gap between school and earning a living through a Career Development Program beginning in elementary school and continuing through the completion of high school.

To facilitate the attainment of this goal, specific objectives were delineated at the beginning of the program. The objectives included the following:

1. To improve the elementary students' knowledge of occupational clusters. Students in upper elementary grades will be able to identify and describe a significantly greater number of occupational classifications than children in control schools as measured by locally constructed tests.

2. To improve the elementary students' knowledge of the basic operations and uses of basic industrial and business equipment. Children in upper elementary grades will demonstrate a significantly greater knowledge of the operation and uses of basic shop tools than children in control schools as measured by locally constructed tests.

3. To improve the junior high students' knowledge of the interrelations between different functional areas of business and industry.

4. To improve the junior high students' level of knowledge of requirements and operations involved in a variety of occupations.

5. To improve the junior high students' ability to perceive the relation between specific vocational education activities and "real" occupations.

6. To improve the senior high students' attitude toward vocational education.

7. To increase the number of students completing Grade 12.

8. To increase the number of graduates attaining and holding jobs that promise room for advancement.

The vocational education program was developmental in nature and pyramidal in design, beginning in the upper elementary grades and continuing through high school. At the upper elementary level students were offered a broad base of vocational information and orientation to the world of work. At this level the special study units based on the use of occupational clusters were injected into the social studies classes.

Students learned of the broad range of occupational areas in business and industry, the role of different work areas in society, and were exposed to actual operations involved in different types of jobs.

At the junior high level the program moved into an orientational exploratory phase. The student analyzed his interests and proved his abilities and aptitudes. Students learned the processes by which goods and services were produced and the inter-relationship between the production, management and service areas of business and industry. At this level and at the senior high level the material was injected into each of the disciplines offered at the schools.

On the senior high level the student progressed to an exploratory preparational phase. Students continued the exploratory experience initiated in junior high by sampling various skill areas and finally selecting one for intensive training. A work study program enabled the students to use their major skill area in gainful employment. Services to the senior high students included job placement upon leaving school and guidance toward further training.

On all three levels career guidance was related to the special study units on the world of work, films, slides and other visual aides. Speakers from local companies and businesses were used for reinforcement. Field trips were taken to local companies and businesses. Appropriate classroom activities were developed such as simulation games, time organization problems, and role playing. Each school had a career information center which included books, pamphlets, brochures, films and filmstrips. Curricula was also developed for each of the levels.

The project has been evaluated twice prior to this final evaluation. The regional evaluation was conducted in the summer of 1971 while the local evaluation was conducted during the summer of 1972. The third and final evaluation has been compiled and serves as Appendix C of this report.

Although hindered by several problems, the project was implemented and has several accomplishments to its credit. These accomplishments include the development of sound-slides focusing on Cleveland, the use of the cluster concept which gave the student an organizational overview, the use of the discipline concept which facilitated relating the various school subjects to earning a living, and the development of a curricula guide which includes materials from the elementary level as well as the junior and senior high levels.

In the future, the program should be expanded to include all grades, K-12. The expansion of this program and its accompanying activities would allow the elementary students more opportunities to enhance their self-images as well as gain useful knowledge and build positive attitudes for future use.

The materials that have already been developed will continue to be used in the school attendance center in which the Developmental Vocational Education Project was first implemented. This attendance center includes all the elementary schools and junior high schools that feed into the one high school. These materials will be used as part of an ongoing career education program.

The materials used will be continually up-dated as the need arises as will the career information centers already established. These career information libraries will serve all students whether they are directly enrolled in the career education program or not, and as such render even greater service.

6 A.

The Developmental Vocational Education Program was formulated on the premise that getting a job was the next major step in the lives of over 60% of the students graduating from high school within the Model Cities area. In its role of preparing today's youth for lives as productive citizens, the schools have often failed to make the students' school experience relevant to the occupational work area that the students enter upon graduation. The Developmental Vocational Education Program has been an effort to bridge the gap between school and earning a living through a career development program beginning in elementary school and continuing through high school.

The schools involved in the project serve the Model Cities area of Cleveland (See figure 1). The number of children in these schools whose families are on public assistance averages 53%. The high poverty index underscores the need of the children in these schools for knowledge and skills that will enable them to secure gainful employment upon leaving the public school system. The schools served by the project also reflect a poor attendance rate. The rates of attendance declined from the elementary through the secondary grades (See figure 2) supports the contention that as the children progress through the public schools, they increasingly view the education offered as irrelevant to their needs. The need for measures is vital to enable them to see the relationship between what the schools offer and earning a living after leaving school.

At the time the Developmental Vocational Education Program was conceived, no elementary school in the Cleveland system had a vocational information program. Only one junior high was involved in a pilot project of a similar nature although career information had traditionally been provided through the junior high guidance programs. The need for occupational information and developmental programs at the elementary level had been expoused by Ginsburg[1] as early as 1951 and by Super[2] in 1957. Also at this time the junior high programs were structured so that the students were taking a group of skills courses but the skills acquired were not necessarily related to the students' preferred career choices.

With the Georgia Plan[3] in mind, the original proposal for the Developmental Vocational Education Program intended that youngsters in the upper elementary grades would be provided with multi-faceted, child centered program that would result in a demonstrably greater knowledge of occupational areas and a broader range of career aspirations.

The junior high vocational program envisioned by the DVEP proposal was to be restructured. Bateson and Stern[4] had advocated the use of model industries within a school so that the students could be made

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Figure 1

Participating Schools within the Model Cities Area

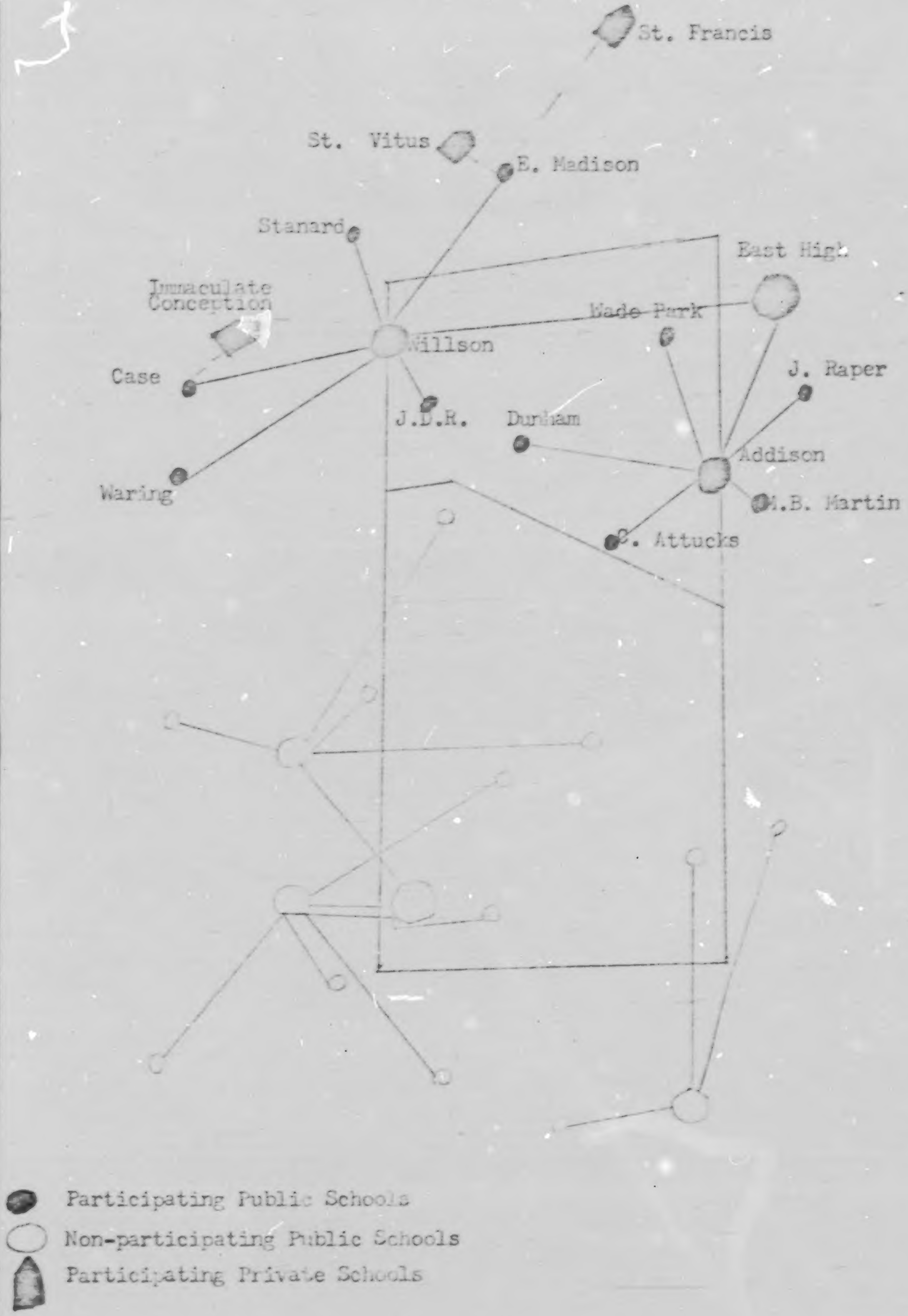
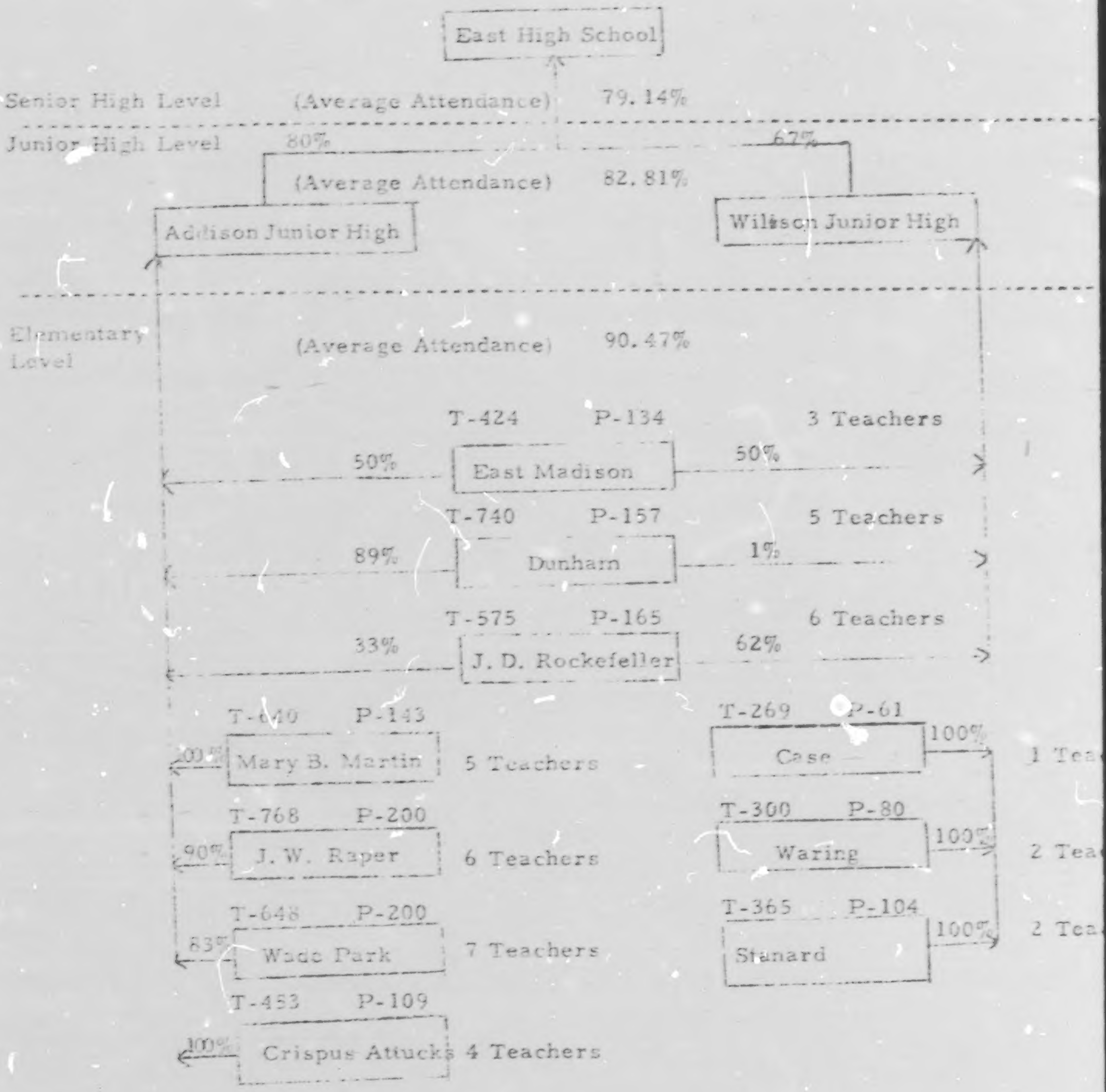

St. Francis
St. Vitus
E. Madison
Stanard
East High
Immaculate Conception
Wade Park
Willson
Case
J. Raper
J.D.R.
Dunham
Addison
Waring
M.B. Martin
C. Attucks
Participating Public Schools
Non-participating Public Schools
Participating Private Schools

FIGURE 2


East High School
Senior High Level
(Average Attendance) 79.14%
Junior High Level
80%
67%
(Average Attendance) 82.81%
Addison Junior High
Wilson Junior High
Elementary Level
(Average Attendance) 90.47%
T-424 P-134
3 Teachers
50%
East Madison
50%
T-740 P-157
5 Teachers
89%
Dunham
1%
T-575 P-165
6 Teachers
33%
J. D. Rockefeller
62%
T-640 P-143
100%
Mary B. Martin
5 Teachers
T-269 P-61
Case
100%
1 Tea
T-768 P-200
90%
J. W. Raper
6 Teachers
T-300 P-80
Waring
100%
2 Tea
T-648 P-200
83%
Wade Park
7 Teachers
T-365 P-104
Stanard
100%
2 Tea
T-453 P-109
100%
Crispus Attucks
4 Teachers

* P - Participating 1,353

T - Total Enrollment 5,182

Percents indicated the percent of the students from each school that "Pass" into the indicated schools on the next level.

aware of what role or function each facet played in the functioning of the entire industry. The use of this model industry, implemented with field trips to work sites, and employee-student interaction, would provide the students with first-hand knowledge of job conditions, requirements and wages.

Under the proposed Developmental Vocational Education Program the occupational skill sampling approach that has been successful in the Pittsburgh Occupational Vocational and Technical Program[5] was to be implemented in the senior high. This approach would facilitate the student in acquiring different skills and eventually narrowing his occupational options on the basis of his sampling experience. A second stage of the senior high implementation would be to work-study experience of attending school for 1/2 day and holding a part-time job with a cooperating firm for the remainder of the day.

Campbell's idea[6] was to be implemented also. Campbell's idea was to guide students in career choices and underscore the relation between the students' vocational education activities and the real occupational world.

As originally proposed and generally implemented, the Developmental Vocational Education Program was developmental in nature and pyramidal in design (See figure 3). The pyramidal design has been endorsed by the National Advisory Council on Vocational Education[7]. In accordance with this approach, a student who entered the program in the fifth grade and continued in it until graduation from senior high would move successively from a broad informational orientational approach at the elementary level to an orientational-explorational approach at the junior high level and then to an exploratory-preparational approach in senior high. This approach would give the student the opportunity to make better informed and broader-ranging choices at each level.

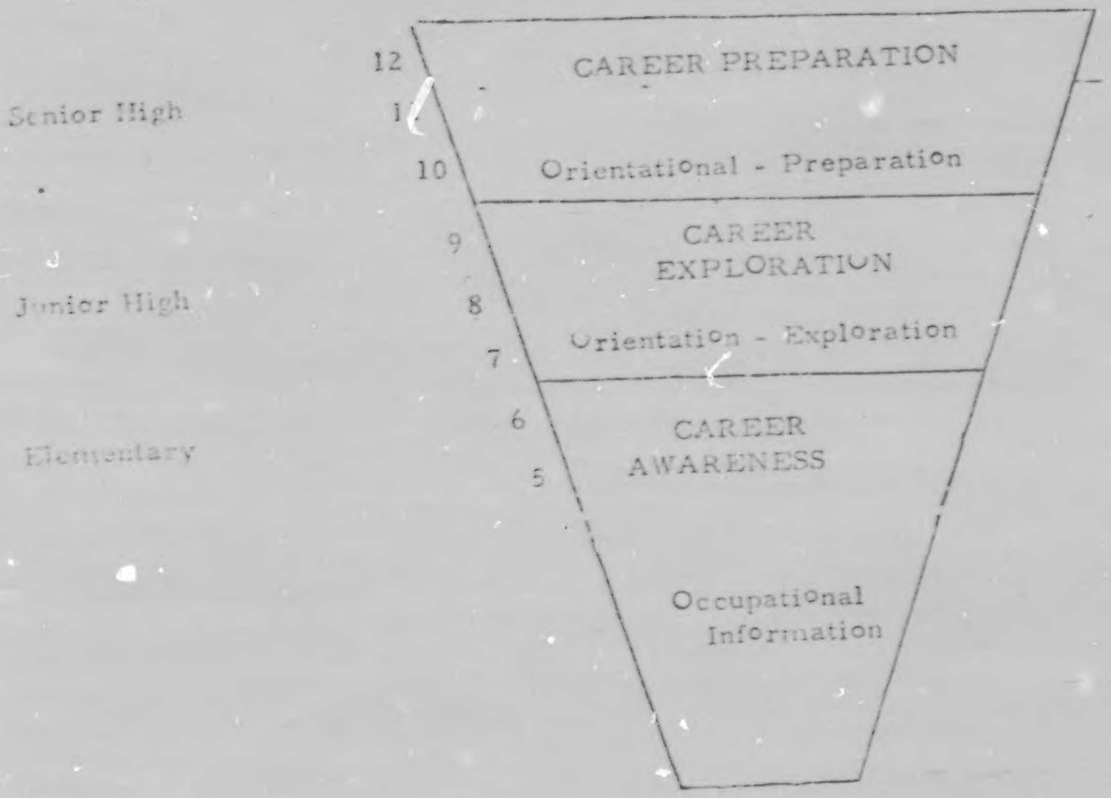
References

1. Ginsberg, Eli. Occupational Choice: An Approach to a General Theory. New York: Columbia University Press, 1951

2. Super, Donald E. The Psychology of Careers: An Introduction to Vocational Development. New York Harper Row, 1957

3. The Georgia Plan for Industrial Arts. In: Cochran, Leslie H. Innovative Programs in Industrial Education Bloomington, Ill.: McKnight and McKnight, 1970, pp. 45-49.

FIGURE 3


12
Senior High
11
10
CAREER PREPARATION
Orientational - Preparation
9
Junior High
8
7
CAREER
EXPLORATION
Orientation - Exploration
6
Elementary
5
CAREER
AWARENESS
Occupational
Information

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6 B.

The overall goal of the Developmental Vocational Education Program was to bridge the gap that exists between the schools and world of work through a career development program that begins in the elementary schools and continue through the students' completion of high school. Objectives were specified that would facilitate achieving this overall goal.

Objectives

The program was designed to achieve the following objectives:

1. Students in upper elementary grades will be able to identify and describe a significantly greater number of occupational classifications than children in control schools as measured by locally constructed tests.

2. Children in upper elementary grades will demonstrate a significantly greater knowledge of the operation and uses of basic shop tools than children in control schools as measured by locally construction tests.

3. Students at the junior high level will demonstrate a significantly greater knowledge of the different func-

tional areas of business and industry than children in control schools as measured by locally constructed tests.

4. Students at the junior high level will demonstrate significantly greater knowledge of the requirements of an operations involved in a wide variety of occupations than students in control schools.

5. Students at the junior high level will demonstrate a significantly greater ability to describe the relation between specific vocational education activities and "real" occupations than students in control schools.

6. Students at the senior high level will demonstrate significantly more possitive attitudes toward their vocational education than students in control schools as measured by locally constructed tests.

7. A significantly greater proportion of students enrolled in vocational education at the senior high level will complete grade 12 than in control schools as determined by project records.

8. A significantly greater number of students graduating from high school will obtain and hold jobs with room for advancement than students in control schools as determined by a follow-up study.

Other objectives implied by the project rationale and operations included:

1. The Developmental Vocational Education Program will broaden the occupational aspirations and opportunities of the Model Cities area youth.

2. Cooperation between schools and local manpower agencies will be promoted by visits of the students to company work sites.

3. Students will be more aware of the relation between what they learn in school and earning a living upon graduation.

Specific procedural objectives for each level of instruction were delineated:

Elementary Level

1. Special units on the world of work will be injected into social studies and language art classes.

   The units will introduce the students to a broad range of occupational areas and the value of each to society. The emphasis will be on occupational areas rather than on specific jobs, including new occupational areas that are expected to emerge in the future as a result of improving technology.

2. A career information center will be created in the library of each participating elementary school.

   The centers will include books, pamphlets, and films describing different occupational areas and on choosing a career.

3. A floating work orientation team will be provided to work with the elementary school teachers on developing appropriate classroom activities such as role playing, simulation games, time organization problems.

   The work orientation team will be responsible for developing the career information centers in the schools and organizing field trips.

4. Field trips to local companies and speakers from the same will be provided for a first hand exposure to the real world of work, to reinforce classroom units on the variety of occupational areas, and to see the actual operations involved in different work areas.

5. Students will participate in field trips to junior high and high school vocational education facilities to perform a number of simulated work tasks in different occupational areas.

   These activities will be organized by the work orientation team with the assistance of students at the junior and senior high levels. The use of older students will help elementary age children identify with a work role model.

Junior High Level

Grade 7

1. All students in Grade 7 will take vocational education.

Students will continued to learn the full range of occupational opportunities along with the requirements and advantage of each. Instruction will be organized around how different occupations fit into the production-management-service cycle of business and industry so that students will see business and industry as a totality.

2. A model industrial system will be established with management, production, and service components to enable the students to relate the concepts they have learned to actual experience in planning and managing the production of a product. A production line will actually produce the product and a service department will service and repair the product. Each student will spend 12 weeks learning the operations of each of the three areas.

3. A series of field trips to company work sites will enable the students to spend time with and talk to employees working in different areas to get a feel of the actual duties performed, working conditions, wages, job requirements, and advantages of the occupation.

4. The work orientation team will conduct group and individual counseling sessions in which students will discuss their reactions to the field trips and the role they play in the model industrial system. The team will assist the students in a self-evaluation procedure where the students begin analyzing their own abilities, aptitudes, and the interests in the context of future employment possibilities. Counseling will be coordinated with activities of the Guidance Department. The team will be responsible for the organizing and conducting of field trips, model industrial system activities, and instruction in the way of an economic system functions.

5. A career information center will be established in the library of participating junior high schools. The centers will contain books, pamphlets, brochures, and films on the opportunities available in different occupational areas.

6. Parent-pupil clubs will be formed for after school or evening meetings using school facilities in which the parents will join their children in working on projects of interest to the students. The clubs will be organized and conducted by the work orientation team.

Grade 8 and 9

1. The vocational course of study will become optional to the student at grades 8 and 9.

2. On the basis of his sampling of a broad range of occupations and his exposure to and experience with some of the operations involved, the student with the aid of the work orientation team will choose areas that are of interest to him for further study and experience.

3. Counseling, field trips, industrial speakers, use of the career information center, participation in the model industrial system, and parent-pupil clubs will continue as in grade 7, but more time will be spent on instruction and experiences in narrower work areas. The orientation will remain exploratory, but on a deeper level and within a more restricted range. Students will begin to build competance in a number of skill areas. Instruction will be offered in the following areas:

    a. Woodwork
    b. Mechanical Drawing
    c. Printing
    d. Metal Shop
    e. Materials and Processes
    f. Typing
    g. Introduction to Management
    h. Retailing
    i. Home Economics (Food and Clothing)

4. Students will participate in instructing children from the elementary schools in the operations of various shop tools and machinery.

High School Level

1. A career information center will be established in the senior high school with a broad array of information on job opportunities, post graduate training programs, job requirements, and career planning.

2. At each grade level the work orientation team will provide intensive occupational counseling to help the student analyze his interests, aptitudes and abilities,

make decisions as to the next step to take in his career development. Such counseling will be coordinated with the activities of the Department of Guidance.

3. At grade 10 the students will sample among different job skills. Guided by the work orientation team student will choose four occupation areas among which to rotate on a nine-week basis. Instruction will be offered in the following areas:

   a. Typing, Shorthand, and Office Practice
   b. Bookkeeping
   c. Retailing and Sales
   d. Wood Shop
   e. Metal Shop
   f. Drafting
   g. Appliance Mechanics

4. In grade 10 the work orientation team will instruct the student in how the particular skills they are learning form the basis for the operations involved in particular occupations. This instruction will be supplemented by work site visits to observe the operations involved in related occupations and by demonstration visits by tradesmen and other employees from cooperating companies to reinforce the idea that the skills being learned bear a real relation to the opportunities available in the world or work.

5. At grade 11, on the basis of their previous experiences and with the guidance of the work orientation team the students will choose one major occupational skill in which to major for intensive training. Instruction will be offered in the following areas:

   a. Cooperative Office Education (typing, shorthand, bookkeeping, office programming)
   b. Merchandizing, Retailing and Sales
   c. Banking
   d. Home Economics (foods and food service, home nursing, vocational homemaking)
   e. Carpentry
   f. Appliance Mechanics
   g. Auto Mechanics

h. Machine Shop
i. Mechanical Drawing and Drafting
j. Graphic Arts and Printing
k. Building Maintenance

6. In grade 11 students majoring in different work areas will continue to make work-site visits to observe how the skills they are learning match those used by employees working in different occupations. They will also observe at work and talk to students in grade 12 who are involved in a work-site program, so that they may see first-hand that the skills they learn in school are saleable skills and form the basis for earning a living.

7. At grade 12, the students will enter a work-study program in which they will attend school for 1/2 day and hold a part-time job with a cooperating company for the other half. The job will enable them to earn money while putting their training to use in a real work situation. Placement for work-study will be the responsibility of the work orientation team, who will monitor the students' performance on the job, provide guidance and support and assist the student in interpreting his work experience in terms of what his next step in career development will be.

8. The work orientation team will play a large role in helping the student find employment or plan for further vocational training following graduation. These efforts will be coordinated with the job placement program operated by the Job Development Project, a program currently operating under state funds which has record of placing 95% of its student clientele in jobs after graduation.

6 C.

Being pyramidal in design and developmental in nature, the program was to facilitate the natural progression of the student from one phase to another with a maximum of continuity and a minimum of disruption. Upon completion of the multi-faceted program offering information and orientation to the gamut of occupations, the fifth and sixth grade pupil was to progress naturally to the next plateau in the design.

At the junior high level the student was to embark upon an orientational-explorational course of study. Within this framework the student was acquiring skills to add to his previously gained knowledge about the various occupational clusters (See figure 4). The acquisition of these skills was not to be in the traditional project-centered junior high industrial arts program. Instead a "model" industry was to be used to illustrate to the student the inter-relations between production, management and service areas of business and industry. In one junior high, the production woodshop achieved a fair amount of success.

Upon entering senior high, the student is at the threshold of the last major phase of the pyramid. The culmination of this program will be graduation from high school with enough skills to obtain and retain a job that offers opportunities for advancement (See figures 5-7). In striving for this end the student found the program narrowing from a career-orientation-explorational one to a career-preparational one. Having allowed the student to sample various skills, his school program now provided for intensive training in one skill area of his choice. The student's school program in his senior year was supplemented with a half-day work experience that not only provided on-the-job experience but offered the incentive and satisfaction of earning a wage.

The line of administrative authority and responsibility is represented by figure 8. Solid lines represent a line relationship and broken lines a staff relationship. Provision had been made for advisory input from Model Cities at all administrative levels.

In addition, there was established a Developmental Vocational Education Committee composed of seven members: Four representatives of the Cleveland Model Cities Association and three representatives of the Cleveland Board of Education, one of which was the Project Manager of the program. The Committee made recommendations for effective implementation of the program. Recommendations were carried to the administration of the Cleveland Public Schools through the Model Cities Cleveland Public Schools Liaison person.

The staff that implemented the Developmental Vocational Education Program involved three work orientation teachers, 10 vocational aides and the project director. During the second year there were staff additions that resulted in four work orientation teachers, and 13 vocational aides. At the end of the third year, however, the number of vocational aides had been reduced to seven. Participating teachers within the Cleveland School System totaled 215 while teacher participation in the non-public schools totaled eight.

In the public school system, the 10 participating elementary schools had a total of 5,182 students. Of this total 1,353 students par-

FIGURE 4

WILLSON JUNIOR HIGH

TOTAL ENROLLMENT 692

TOTAL VOCATIONAL EDUCATION ENROLLMENT 551

% OF STUDENTS		% OF STUDENTS ENROLLED
Industrial Arts	232	33.3%
Business Education	145	20.1%
Home Economics	152	22.0%
Occupational Work Adjustment	22	3.2%
	551	

ADDISON JUNIOR HIGH

TOTAL ENROLLMENT 1425

TOTAL VOCATIONAL EDUCATION ENROLLMENT 1301

Industrial Arts	657	46%
Home Economics	504	35%
Business Education	140	9%
	1301	

FIGURE 5

EAST HIGH SCHOOL
TOTAL ENROLLMENT 1550

Entering 10th grade 800 students - 1969

Graduating seniors 290 - 1972

% of students graduating in this class 36.25%

% of students in Industrial Arts Program - 22.1%

% of students in Business Education Programs - 50.1%

% of students in Home Economics Program - 22.8%

% of students in College Prepratory Programs - 8%

FIGURE 6

EAST HIGH SCHOOL
BUSINESS EDUCATION
777 students
enrolled

SUBJECT	% OF STUDENTS ENROLLED
Bookkeeping	16.8%
Business English	5.1%
Co-orperative Office Education	2.4%
Distributive Education	.3%
Office Practice	2.1%
Shorthand	6.1%
Vocational Sales	2.7%
Work Experience in Banking	.5%
Typing	69%

HOME ECONOMICS
401 students
enrolled

SUBJECT	% OF STUDENTS ENROLLED
Co-operative Home Economics	.5%
Clothing	20.7%
Dynamic Living	21%
Foods	14.8%
Food Service	11.1%
Homemaking	12.2%
Home Nursing	11.2%

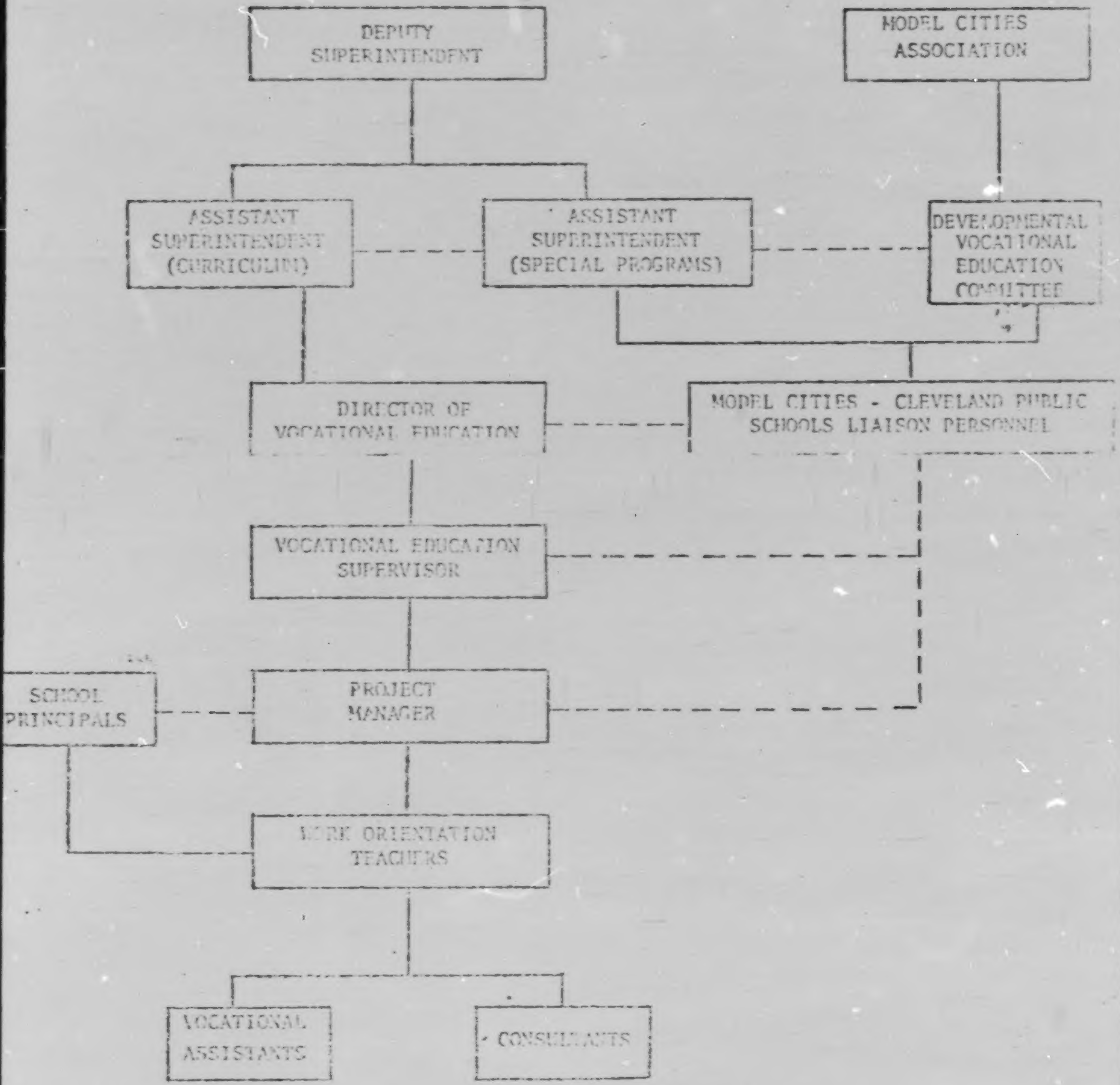
FIGURE 7

EAST HIGH SCHOOL
INDUSTRIAL ARTS
421 students
enrolled

SUBJECT	% OF STUDENTS ENROLLED
Vocational Machine Shop	4.5%
Occupational Work Experience	9.7%
Vocational Printing	2.8%
Building Maintenance	3.6%
Auto Mechanics	11%
Appliance Mechanics	8%
Mechanical Drawing	17.8%
Metal	20.3%
Woods	18%
Graphic Arts	8%

FIGURE 8

LINE OF ADMINISTRATIVE AUTHORITY FOR
DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM


DEPUTY SUPERINTENDENT
MODEL CITIES ASSOCIATION
ASSISTANT SUPERINTENDENT (CURRICULUM)
ASSISTANT SUPERINTENDENT (SPECIAL PROGRAMS)
DEVELOPMENTAL VOCATIONAL EDUCATION COMMITTEE
DIRECTOR OF VOCATIONAL EDUCATION
MODEL CITIES - CLEVELAND PUBLIC SCHOOLS LIAISON PERSONNEL
VOCATIONAL EDUCATION SUPERVISOR
SCHOOL PRINCIPALS
PROJECT MANAGER
WORK ORIENTATION TEACHERS
VOCATIONAL ASSISTANTS
CONSULTANTS

ticipated in the fifth and sixth grade program. The three participating non-public schools had 241 students participating.

METHODS AND MATERIALS

Elementary Level:

1. The program was injected into social studies classes using fifteen occupational clusters as guides. The clusters introduced the students to a broad range of occupational areas and the value of each to society.

   The emphasis on the elementary level was on introduction to the occupations rather than detailed facts about them. Between September and November, 1971, five occupational clusters were introduced to the elementary schools. In the period of December, 1971 to March, 1972, two more clusters were added to the list. By June of 1973 the list had been expanded to include a a total of 15 (See figure 9). Using the 15 clusters as a guide, role-playing and simulation games were used. Also curriculum for the various clusters were developed (See accompanying Career Development Curriculum Guide).

2. In each elementary school a career information center was established. Each center contained books, pamphlets and similar materials.

3. To each elementary school a vocational aide was assigned to work with classroom teachers in the development of appropriate activities. One such activity manifested itself as "Operation Shoebox".

4. Speakers were scheduled to address classes within the schools on various topics related to careers. From December 1, 1970 through June 30, 1971 students at Mary B. Martin and John W. Raper Elementary Schools heard several speakers on several different subjects (See figure 10). Subsequently students were addressed on the communication and manufacturing clusters.

5. Field trips were scheduled to local business for first hand exposure to the real world of work. Again, various clusters were dealt with during the period of December, 1970 and June, 1971 (See figure 11). Other field trips were taken throughout the program (See figure 12).

FIGURE 9

OCCUPATIONAL CLUSTERS

Business and Office Occupations

Marketing and Distribution Occupations

Communication and Media Occupations

Construction Occupations

Manufacturing Occupations

Transportation Occupations

Argi-Business and Natural Resources Occupations

Marine Science Occupations

Environmental Control Occupations

Fine Arts and Humanities

Public Service Occupations

Health Occupations

Hospitality and Recreation Occupations

Personal Services Occupations

Consumer and Homemaking-Related Occupations

FIGURE 10

Speakers	Title	Topic of Speech	No. of Students Attended	Date
Mrs. Aretha Woods	Community Relations Specialist, Ohio Bell	Introduction to the World of Work, (Part of staff orientation)	9 Staff Members	February 11, 1971
Mrs. Pauline Crawford	Director of Nursing, Forest City Hospital	Nursing as a Career	35	May 12, 1971
Mr. W.J. Marbury	Public Defenders Office	Law Enforcement	60	May 21, 1971
Mr. Myles Smith	Manager, Issac Higgins Realty Company	Job Possibilities in Real Estate	40	May 26, 1971
Mr. Michael Hodges	Manager, Home Improvement Loans Division, Second Federal Savings and Loans	Loans	43	May 27, 1971
Mr. Clayborne Fagan	Insurance Agent, New York Life	Insurance	40	May 28, 1971

FIGURE 11

Visitation Sites	No. of Students Attended	Date
Cleveland: World Port	63*	May 13, 1971
Computer Center	30*	May 19, 1971
Max S. Hayes Technical High School	35 boys	May 20, 1971
Jane Addams Vocational High School	40 girls	May 25, 1971
Fisher Body - Division of General Motors	50*	May 25, 1971
W.B.O.E. Radio Station	33*	May 26, 1971
Cleveland: World Port	35*	June 2, 1971
Tip Top Bakery	35*	June 3, 1971

*Groups contained both boys and girls.

FIGURE 12

FIELD TRIPS

Places Visited	Times Visited
Cleveland Public Library	1
Emerson's Press	1
Hot Shoppe Restaurant	1
The Playhouse	1
Cuyahoga Meat Company	2
Eaton Telecomputer Company	2
The Plain Dealer	8
The Art Muesum	4
Cuyahoga Community College	2
Filtration Plant	2
NASA	2
The Health Museum	1
Ship Yard	2
Jones Drug Center	1
East Ninth Street Pier	1
B.O.E. Ship Woodbine	4
WVIZ-TV	3
Western Electric	2
Cleveland Aquarium	2
Public Hall	1
Cuyahoga Courthouse	1
WJMO Radio Station	1
Halle's	1
The Ohio Bell	1
City Hall	1
Auto Aviation Museum	2
McDonald's Restaurant	3
Cooper'School	1
Picker Corporation	1
Charity Hospital	1
Dan-Dee Potatoe Chips	1
International Business Machines	1
Mt. Sinai Hospital	1
Cleveland Press	2
Cleveland Trust Bank	1
U.S. Postal Services	2

6. The sound-slides, films, filmstrips, transparencies, posters and bulletin boards served as audio-visual aids in illustrating various occupational areas (See figures 13-17).

Junior And Senior High Levels:

1. At the junior and senior high levels the program was injected in all areas (See figures 18-25). The occupational clusters were related to the subject being studied through lesson plans that included objectives, activities, materials needed and tests (See accompanying Career Development Curriculum Guide).

2. As at the elementary schools, career information centers were created in the libraries, speakers and work-site visitations scheduled, along with the use of appropriate level audio-visual aids.

3. A specialized aspect of the junior and senior high levels was the individual/group counseling. Conducted by members of the program staff and co-ordinated with the guidance department, these sessions were to serve as a period for student reactions to the activities of the career programs and to assist the students in self-analyzation of their own abilities, aptitudes and interests in the context of a career choice.

4. Father and son vocational courses at the East High Annex used.

6 D.

The results of the program can best be highlighted by the strengths and weaknesses of the program. Following this highlight section the results and accomplishments will be dealt with in greater detail.

Strength 1:

The use of a developmental program with a pyramidal design which started in the upper elementary grades and continued until graduation from senior high school.

Result

Provisions were made for the student to start with a broad career informational base and move successively to a career-explorational phase and then to a career-preparational phase.

FIGURE 13

Sound Slides

WABQ (Radio)

WVIZ (Television)

Call-N-Post

Post Office

Cleveland Hopkins International Airport

Cleveland International Port

Cleveland Transit System

Penn Central Railroads

Cleveland Fire Department

St. Vincent Charity Hospital

Richmond Brothers Clothing

Foods

Clothing

Infant Care

East High School Academic Program

East High School Vocational Program

East High School Work Study Program

East High School Extra-Curricular Activities

Manpower Training Center

FIGURE 14

16 MM Films

Careers in Transportation

Money in the Bank and Out

Horizons Unlimited (Health Careers)

Building a House

The Joys of Selling

Seaport

Careers in Machine Trades

Careers in Building Trades

Careers in Communication

Careers in Skilled Services (Sales)

Careers in Personal Services

Careers in Industry

Careers in Business and Office Occupations

The City

Our City Government

Trucks in Our Neighborhood

Dairy: Farm to Door

Postman: Rain or Shine

FIGURE 15

Filmstrips

Who Are You?

How Do You Get There?

What Do You Like To Do?

What Is A Job?

What Good Is School?

Motion Pictures

Radio

Television

The Newspaper

The Telephone

Books

Communicating Ideas

Communicating Without Words

Conservation For Today's America (Series with Sound)

- Land Conservation Today
- Water Conservation Today
- Urban Conservation Today
- Wildlife Conservation Today
- Mineral Conservation Today
- Forest Conservation Today
- Soil Conservation Today

FIGURE 16

Transparencies

Review of Working Drawings, Conventions and Symbols

Map of Model Cities Area

Participation Schools and Attendance

Line of Administrative Authority

Request Form

Lesson Guide

Field Trip Form

Certificate of Application

Occupations Related to Physical Education

Occupations Related to English

Occupations Related to Business Education

Job Families Related to Business Education

Disciplines and Related TV Shows

Occupational Clusters and Related TV Programs

Occupational Clusters and Related Newspaper Items

Occupational Clusters and Related Radio Programs

Comic Strip Illustrating Occupation and Cluster

Labor Statistics of the 1970's

Projected Changes in Labor Force for the 1970's

Occupational Growth during the 1970's

Training Needs Determined by Growth plus Replacement

Forced Air Systems

Fundamentals of Carpentry

House Heating Complaints

House Circuit Layout

Forced Hot Air Systems

Plumbing Fixtures

Parts of a Faucet

Refrigeration Unit

FIGURE 17

Posters Developed

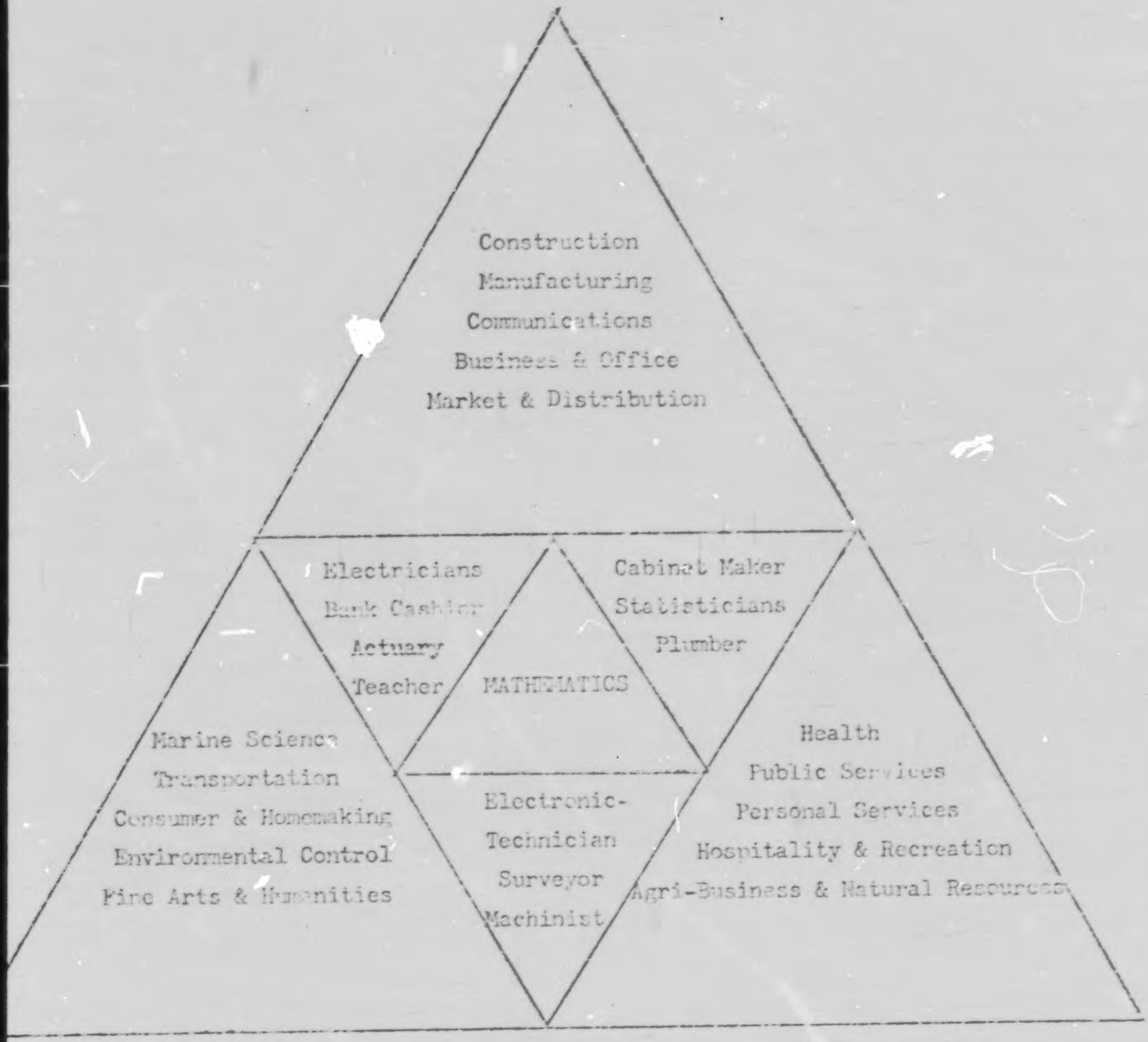
Business and Office
Manufacturing
Fine Arts and Humanities
Marine Science
Marketing and Distribution
Environmental Control
Hospitality and Recreation
Agri-Business and Natural Resources
Communication
Transportation—Ships
Manufacturing—Apparel
Health Services

Bulletin Boards Developed

Health Occupations
Communication Media
Transportation
Manufacturing
Public Services

FIGURE 18

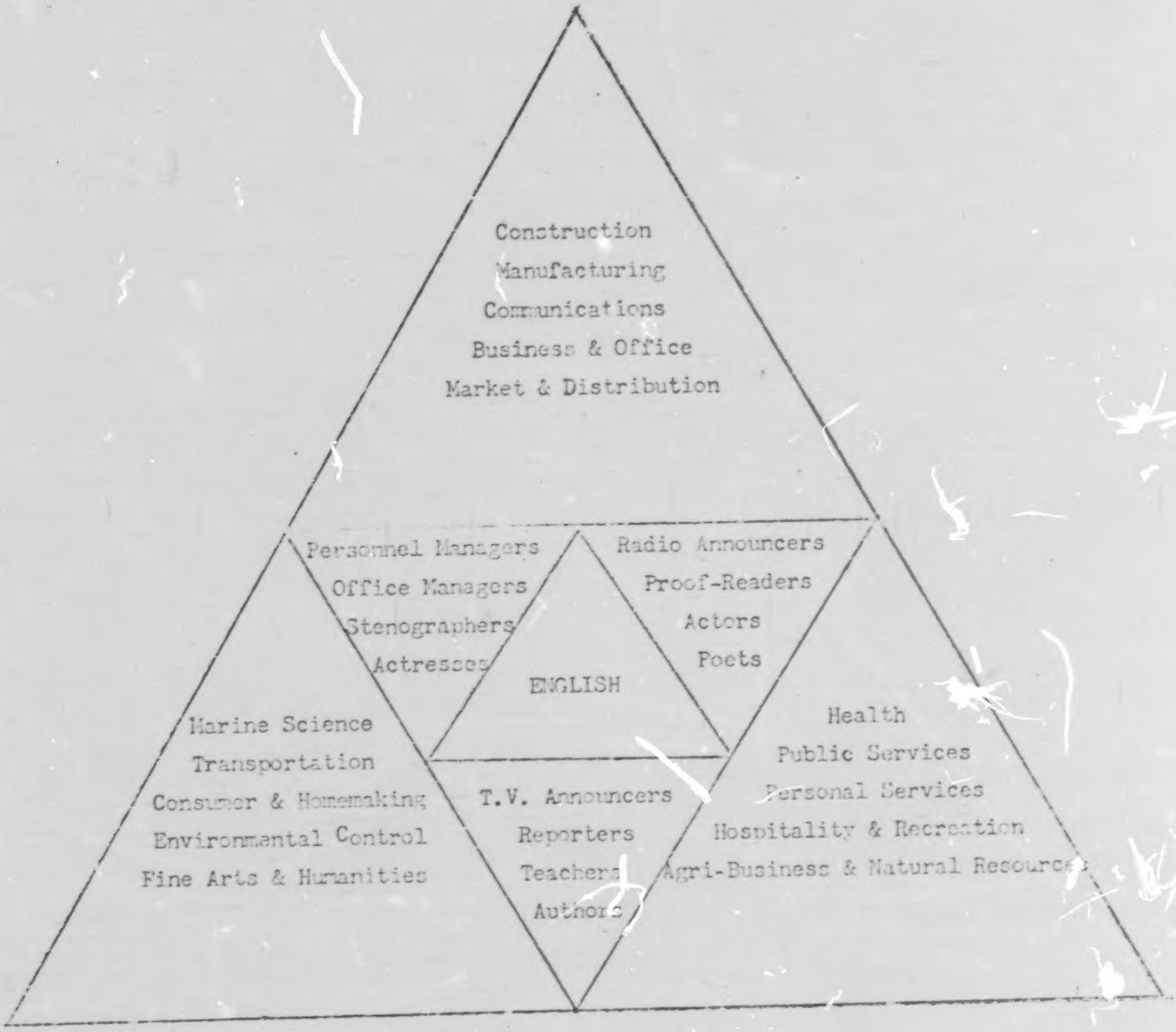
DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM
PHASE II


Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Electricians
Bank Cashier
Actuary
Teacher
MATHEMATICS
Cabinet Maker
Statisticians
Plumber
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
Electronic-
Technician
Surveyor
Machinist
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO MATHEMATICS

FIGURE 19

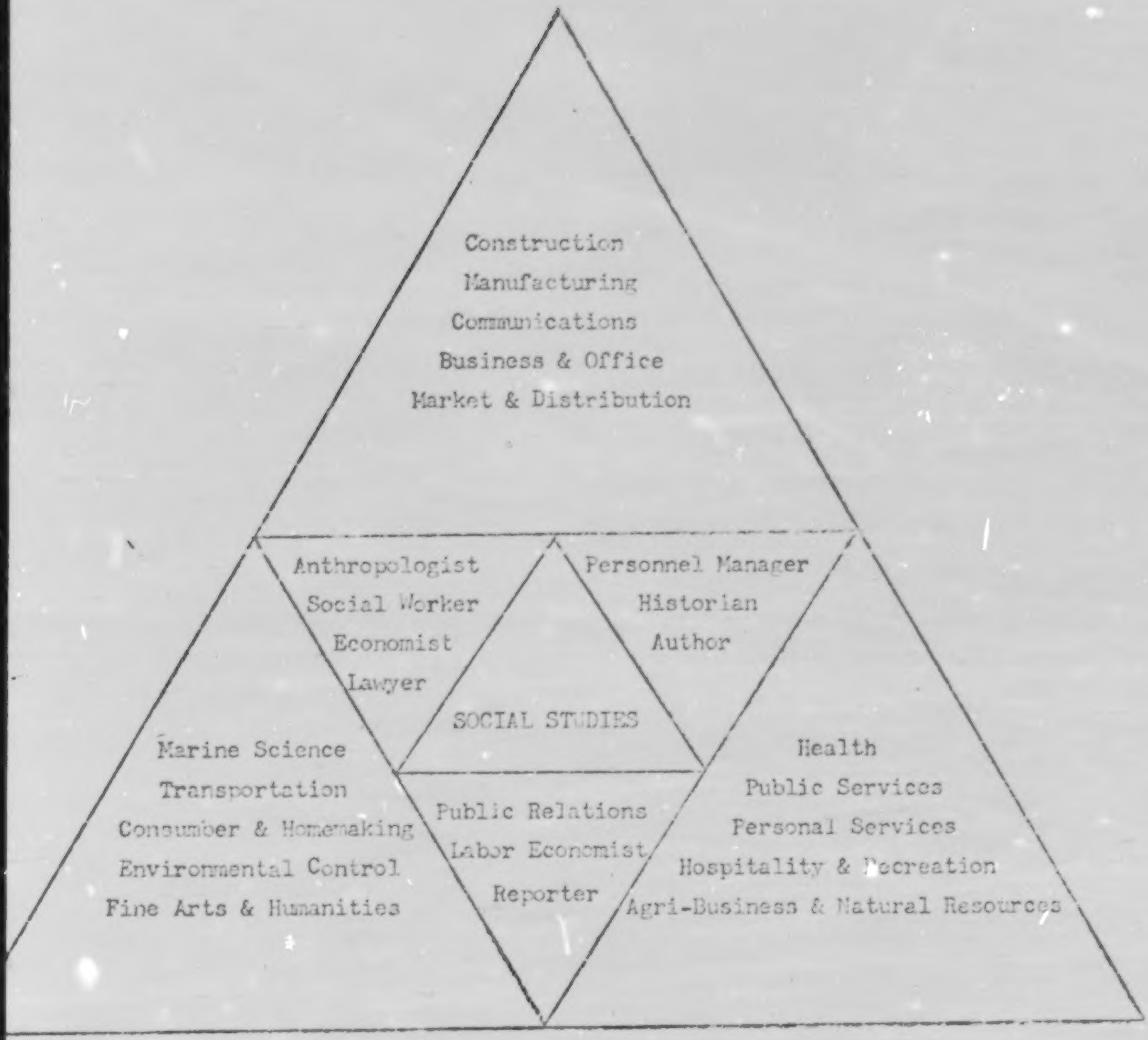
DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM
PHASE II


Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Personnel Managers
Office Managers
Stenographers
Actresses
Radio Announcers
Proof-Readers
Actors
Poets
ENGLISH
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
T.V. Announcers
Reporters
Teachers
Authors
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO ENGLISH

FIGURE 20

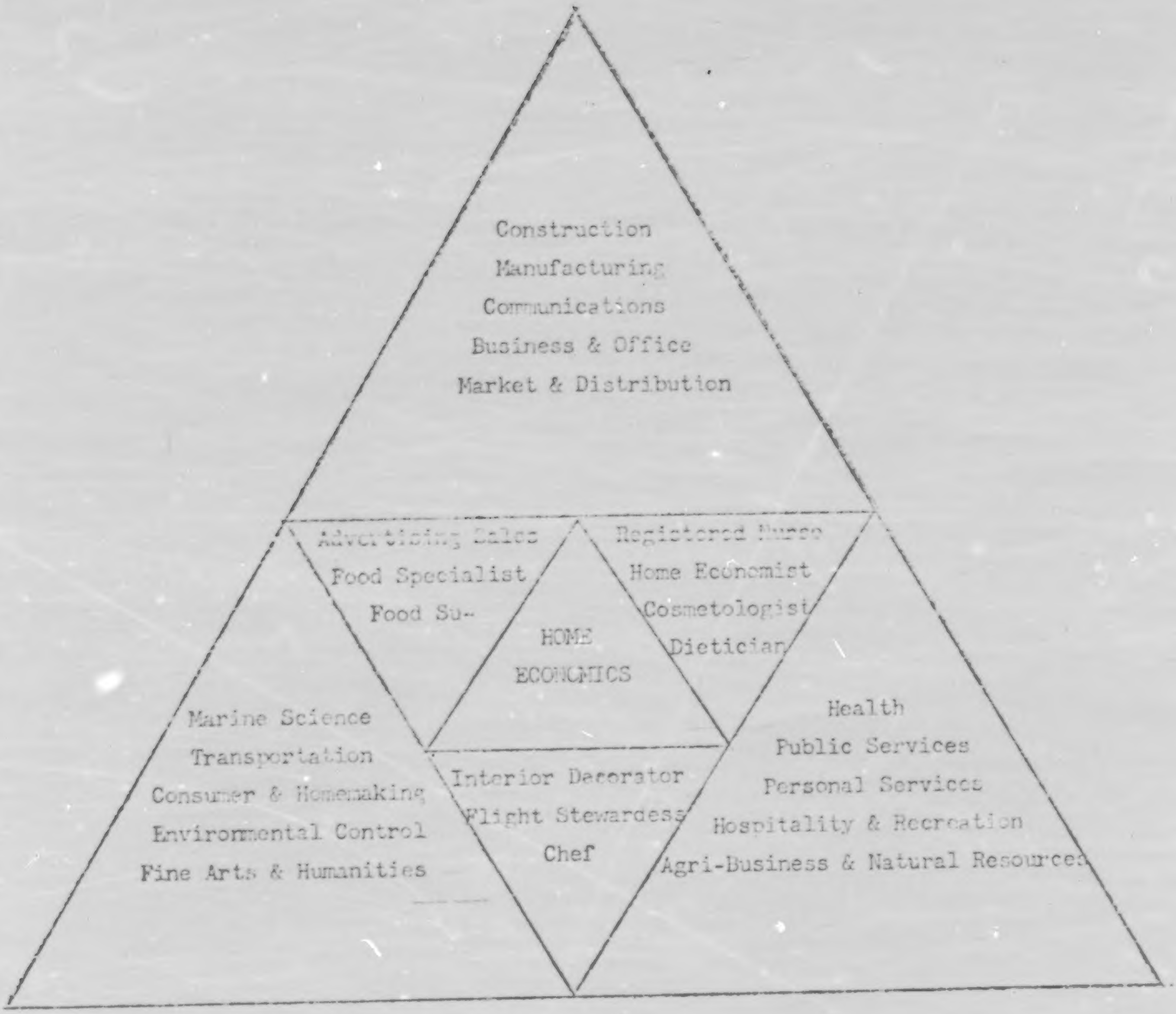
DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM
PHASE II


Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Anthropologist
Social Worker
Economist
Lawyer
Personnel Manager
Historian
Author
SOCIAL STUDIES
Marine Science
Transportation
Consumber & Homemaking
Environmental Control
Fine Arts & Humanities
Public Relations
Labor Economist
Reporter
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO SOCIAL STUDIES

FIGURE 21

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM
PHASE II

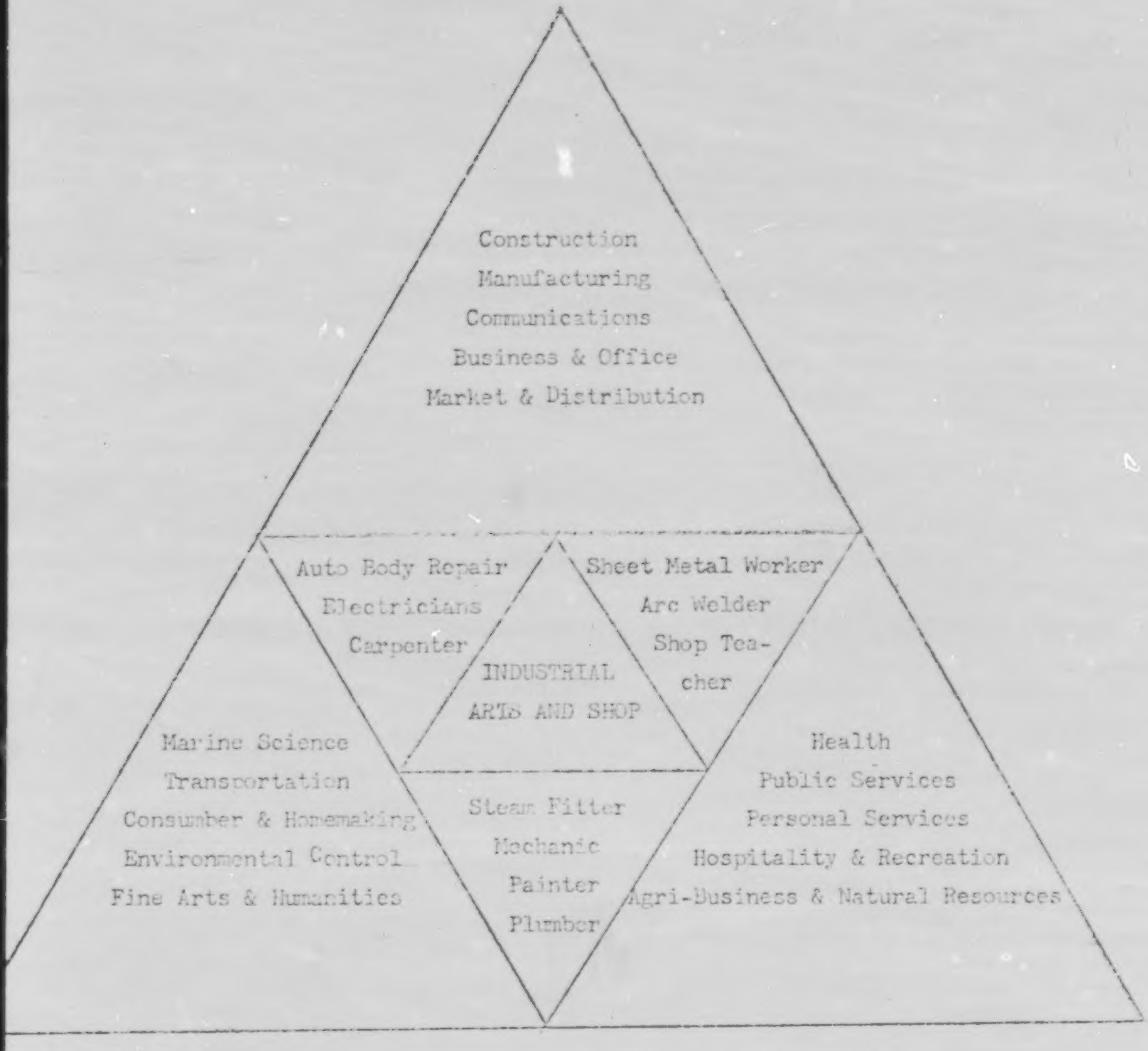

Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Advertising Sales
Food Specialist
Food Su-
HOME ECONOMICS
Registered Nurse
Home Economist
Cosmetologist
Dietician
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
Interior Decorator
Flight Stewardess
Chef
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO HOME ECONOMICS

FIGURE 22

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

PHASE II

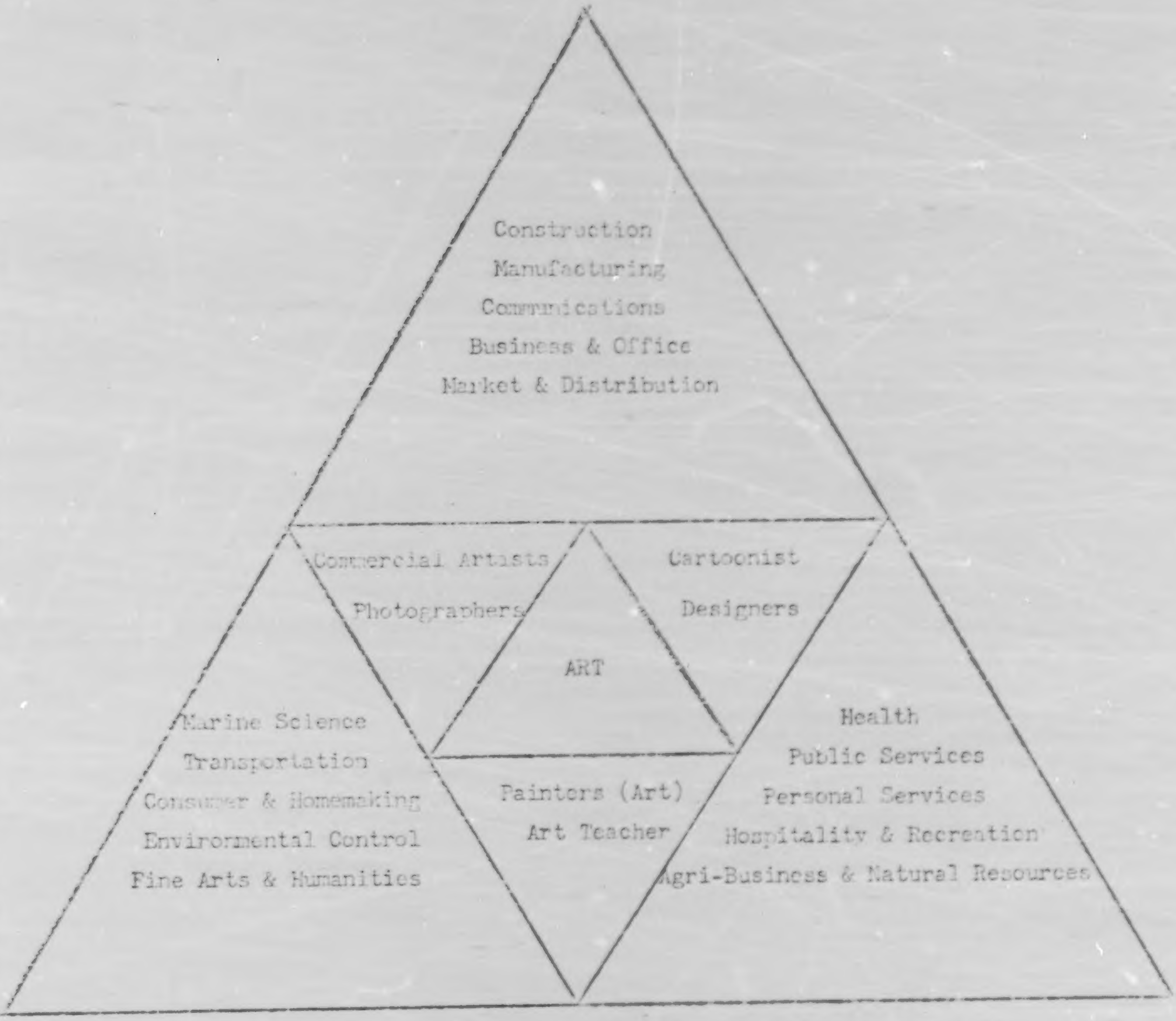

Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Auto Body Repair
Electricians
Carpenter
Sheet Metal Worker
Arc Welder
Shop Teacher
INDUSTRIAL ARTS AND SHOP
Marine Science
Transportation
Consumber & Homemaking
Environmental Control
Fine Arts & Humanities
Steam Fitter
Mechanic
Painter
Plumber
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO INDUSTRIAL ARTS AND SHOP

FIGURE 23

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

PHASE II

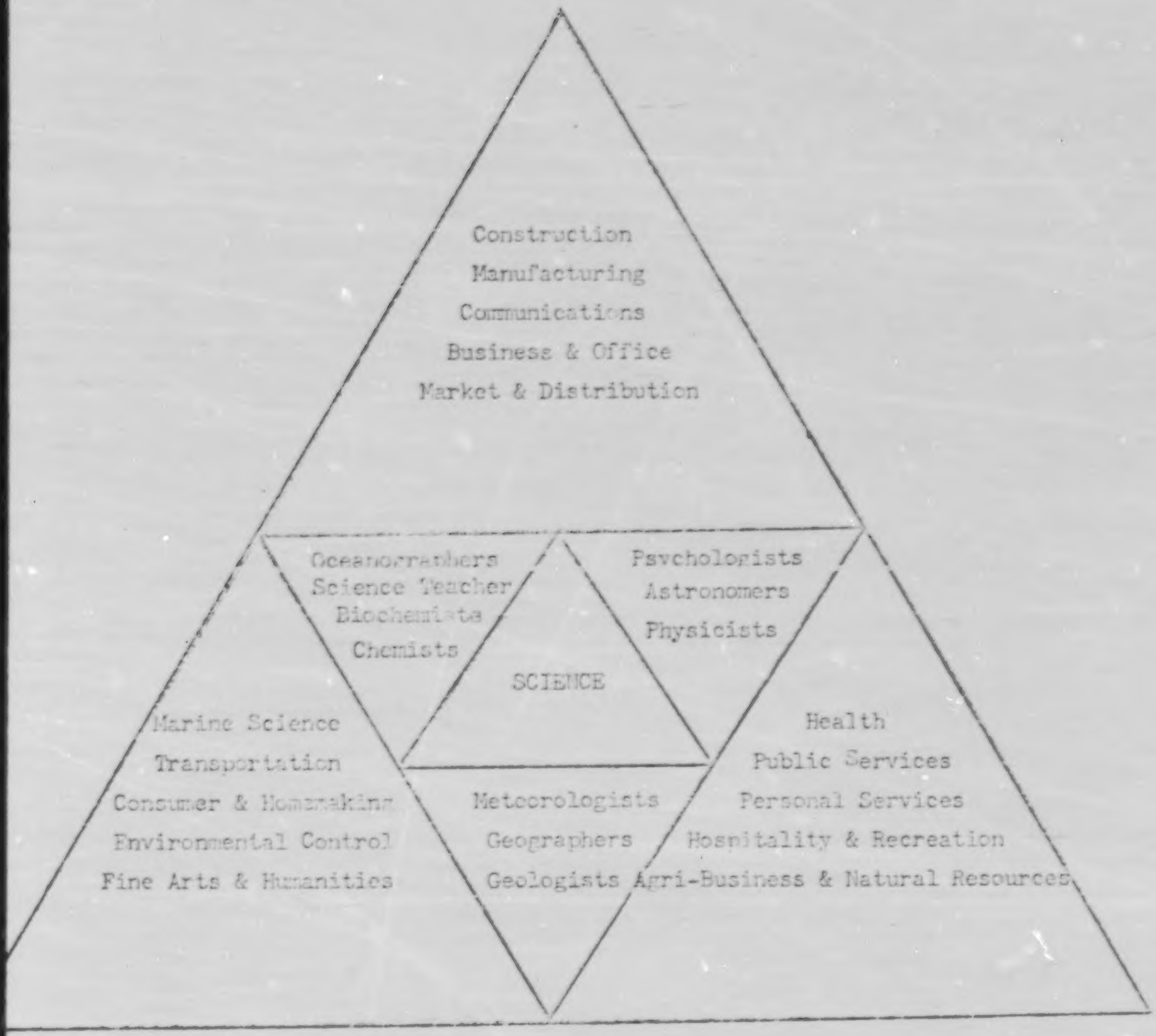

Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Commercial Artists
Photographers
Cartoonist
Designers
ART
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
Paintors (Art)
Art Teacher
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO ART

FIGURE 24

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

PHASE II

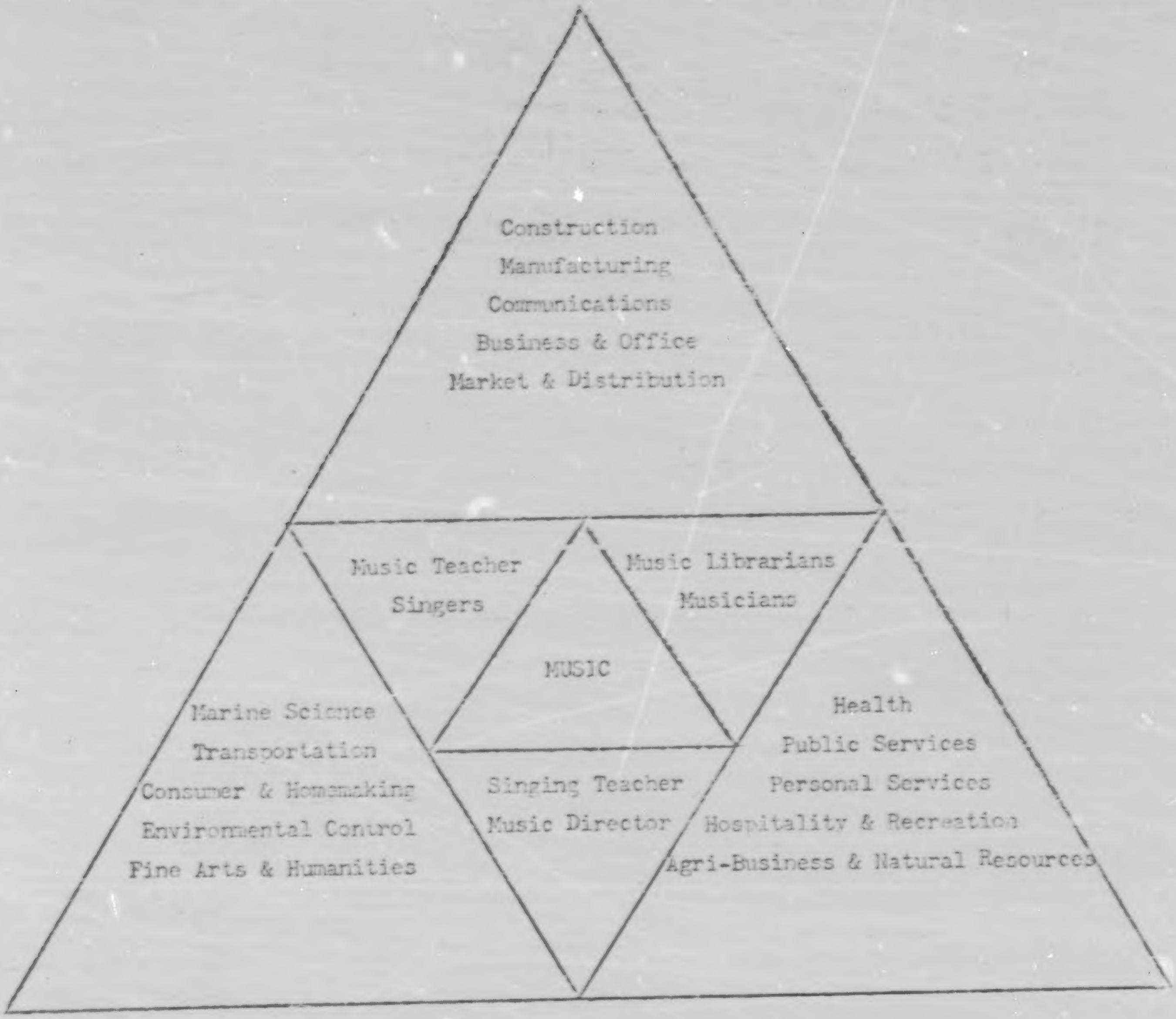

Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Oceanographers
Science Teacher
Biochemists
Chemists
Psychologists
Astronomers
Physicists
SCIENCE
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
Meteorologists
Geographers
Geologists
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO SCIENCE

FIGURE 25

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

PHASE II


Construction
Manufacturing
Communications
Business & Office
Market & Distribution
Music Teacher
Singers
Music Librarians
Musicians
MUSIC
Marine Science
Transportation
Consumer & Homemaking
Environmental Control
Fine Arts & Humanities
Singing Teacher
Music Director
Health
Public Services
Personal Services
Hospitality & Recreation
Agri-Business & Natural Resources

OCCUPATIONS RELATED TO MUSIC

Strength 2:

The use of the cluster and discipline concepts.

Result

Through the use of the cluster concept the children were equipped with the organizational advantage of grouping. Through the use of the discipline concept, students were able to grasp the relation between what they were studying and occupational choices.

Strength 3:

The opportunity of students to develop positive attitudes toward the world of work in general and various specific occupations.

Result

Evaluative evidence indicated that student attitudes were changed by being in the program. DVEP students exhibited occupational preferences different from those of the control students and specifically were more willing to express positive attitudes to lower prestige jobs.

Strength 4:

Senior high students involved in on-the-job training.

Result

Through the work-study program the students were able to use the skills acquired in the classroom, develop good work habits, and enhance their self-image through earning a wage.

Strength 5:

Program designed as a child-centered activity.

Result

With this approach, the child's needs were more profitably met than had the approach been in a teacher-dominated, teacher-orientated room in which teacher preferences might have been a hinderance.

Strength 6:

Enrichment of Model Cities area students' world through speakers, field trips and other supplemental activities.

Result

The speakers provided the students with face-to-face presentations and served as models for the students. The field trips not only provided at-the-site information and stimulation, but served to make the students more aware of the world around them and within their grasp. Above all, these activities helped to break the routine of a teacher-dominated classroom and arouse student interest in the program.

Strength 7:

The development of audio-visual aids, many of which centered on Cleveland and highlighted the opportunities that are here rather than far away.

Result

Through this method the students' awareness of what is real and within their reach was reinforced. In addition these aids served in lieu of field trips in which some students could not participate due to are requirements or illness.

Strength 8:

Establishment of a career information center in each of the participating schools.

Result

The career information center served not only the students participating in the program, but it was available for all the students in the participating schools to use. Further, the career information library can serve as a permanent resource center for student inquiry and its materials can be readily updated.

Weakness 1: Late funding.

Result

Late funding got the program off to a slow start. If funding had been received earlier, manypitfalls could have been avoided.

Weakness 2: Insufficient number of personnel.

Result

The program could have been implemented with greater ease had there been a co-ordinating teacher for the junior high level and another co-ordinating teacher for the senior high level.

The scope of the program was such that a project director should have been employed whose only responsibility was the success of the DVEP.

Weakness 3: Lack of in-depth orientation of staff prior to program implementation.

Result

Lacking a substantial orientation prior to entering the classroom, the vocational aides found themselves lacking teaching skills, clarity about their role, and certain vocational skills necessary for the various supplementary activities of the program.

Weakness 4: Insufficient orientation of participating teachers.

Result

The teachers often misued or under-utilized the vocational aides. Various sources implied that some teachers may have felt imposed upon in taking part in the program and that their role as "The Teacher" was threatened.

Weakness 5: Insufficient time allotted for junior and senior high operations prior to project termination.

Result

As it developed, the DVEP had only one year's operation at the junior and senior high level. It proved to be an insufficient amount of time. A two-year minimum of time was needed for this phase of the program.

Weakness 6: No provision for the evaluation of participating teachers.

Result

If participating teachers had been evaluated as part of the DVEP and had known that such an evaluation would be made it is probable that several things would have resulted: (1) Better class records would have been kept that would have yeilded valuable data for the complation of this report and (2) The knowledge that they were being evaluated with the DVEP as an integral part of their performance and not as something extra would have changed the less than positive attitudes of some.

Weakness 7: Little or no parent participation.

Result

More parental participation would have enhanced the program. The parents' positive attitudes would have reinforced the program's materials and activities.

In the implementation of the Developmental Vocational Education Program several problems arose. The problems encountered and the manner in which they are dealt with can be decisive factors in a project's success. For this reason the Developmental Vocational Education Program's "problems" of the first year in particular must serve as a backdrop for the accomplishments of the program.

The basic problem of the first year was lack of funding until the Fall of 1970. This, in turn, created difficulties in the recruitment of staff,orientation of staff, procurement of materials, reuctancy of participating teachers to disrupt their semester plans and hesitancy of some teachers to become involved with the child-centered activity the Developmental Vocational Education Program offered.

Of the above mentioned first-year problems, most of the detrimental effects of late funding had been dealt with an erased according to the regional evaluation by July, 1971. As it pointed out, the previous semester (and summer of '71) would allow sufficient time for the procurement of materials and development of teacher guides.

While the procurement of materials and the development of teacher guides could be accomplished with more time, the problems of orienting and fully preparing the vocational aides and the participating teachers proved to be a bit more difficult.

Problems with the participating teachers centered around a lack of communication. To some of these teachers the manner in which the Vocational Aides and program materials were to be used was unclear. Some teachers misued or under-utilized the aides by having them just sit through sessions in their classrooms where the aides should have been involved in some supervisory responsibilities and tutoring capacities that would have bolstered the aide's skill areas. Other teachers under-utilized the aides in that the aides' role was limited to the presentation of Developmental Vocational Education Program materials. Still other teachers who were not particularly enthusiastic about the Developmental Vocational Education Program failed to give the aides the positive reinforcement necessary to build the aide's self-confidence in the early stages. This failure inpart, seemed due to teachers feeling "threatened" by the aides presence.

The other major program problems which the teachers centered around Developmental Vocational Education Program materials. In this case the problem was two-fold. The lesser of the two problems was the teachers' misconception that Developmental Vocational Education Program audio-visual materials should be left with the teachers for use in the absence of the aides. Also, this misconception about audio-visual materials caused a reluctance on the part of some teachers to either present an entire Developmental Vocational Education Program lesson in an aide's absence or to conclude a lesson that an aide had started but time had prevented him from finishing. In short, not all participating teachers had been sufficiently "sold" on the Developmental Vocational Education Program in that completing a lesson was looked upon as "extra work".

The second problem was particularly cited in the local evaluation in regard to program delivery in the elementary schools. This involved the somewhat tenuous relationship between the Developmental Vocational Education Program materials and the elementary social studies curriculum. In this evaluation the vocational aides voiced a difficult in relating and justifying any single presentation to the current social studies unit. The difficulty was that the program was limited to one class session (40 minutes) a week and the time to complete a given occupational cluster often required several sessions to complete. It became readily apparent that the two sets of materials increasingly diverged from one another and would follow independent courses.

The teachers substantiated the aides view of injecting Developmental Vocational Education Program material into the elementary social studies curriculum. The justification for relating the two sets of materials to one another seemed somewhat artificial.

As stated above the second major enduring problem centered around the vocational aides. Some of the difficulties in this area have been referred to and are comparable to the "teacher" problems.

Initially, the original ten aides hired were not given sufficient orientation. This, in part, was due to the late funding of the program. The aides felt that not only the quantity of traning they had received but the quality of it had hindered program delivery.

In lieu of observing the participating teachers at the beginning of the program, the aides felt they needed more substantive training in regard to their teaching skills. This deficiency of teaching skills had been noted by several teachers and principals. Also, when those aides attempted to learn the necessary skills, those who were working with less enthusiastic teachers found it more difficult to do, possibly due to less positive feedbacks. The aides voiced this discontent as a dependency on the teachers.

During the course of the program several aides for various reasons resigned giving short notice before doing so. This caused several problems. First of all, if the aide left in the middle of the school quarter, because he had to be a college student, his replacement had to wait until the following registration period. Because most of the work in the program, heretofore, had been carried on by the aide, many teachers felt reluctant to carry it on during his absence as they regarded it as "extra work". Some teachers, on the other hand, agreed to carry the program themselves and were reluctant later to accept a new aide who might suddenly leave the program.

The second problem triggered by aide resignations involved their replacement. When a replacement was obtained, circumstances necessitated a limited orientation period. Then the aide faced being accepted as new personnel in the schools by principals and teachers. Then, too, there was a time lapse between aides and this lapse might have caused some students to lose interest or to have difficulty in getting acquainted with a new aide.

The aides designated one other area as a problem. The problem was of an administrative scheduling nature within the Developmental Vocational Education Program project, the individual schools and between both. A frequent problem, for example, involved scheduling and co-ordinating field trips.

Other problems were encountered by the Developmental Vocational Education Program. One of these was the problem of obtaining first-hand materials from various industries. Many industries refused to issue information regarding the established union agreed-upon wage scale for various positions. Some industries do not have pamphlets or other printed information available, and invariable some companies are slow about filling out and returning questionnaires.

Another problem concerned the number of staff. At the junior and senior high levels, the co-ordinating teacher felt he was spreading himself too thin. He found himself being responsible for a section of the program that involved 3,358 students. Also, the Developmental Vocational Education Program was such that it needed a fulltime director who could devote all of his capabilities and energies to the program's success.

Endeavoring to take elementary-age students on certain field trips caused some difficulties. Many industries refused to admit students of this age because they feel that too much danger is involved. Also, field trips, in some occupational endeavors, are limited by the short operational season.

One of the keys to the success of any educational endeavor is parental participation. For the most part, this project seemed to lack this key ingredient. Certain teacher guides were designed to secure parental participation through the use of TV, radio and newspapers (See figures 26-29). For example, a parent and child might view a TV medical show together trying to identify the various medical occupations that were presented in that show. Although no data was collected regarding parental participation, it is worthy to note its absence.

As for parental involvement at the junior and senior high levels, the co-ordinating teacher did not note any. The Father-Son activities did provide some involvement, and as such, was an exception.

It is against the above background of problems that the accom-

FIGURE 26

TELEVISION PROGRAMS RELATED TO DISCIPLINES

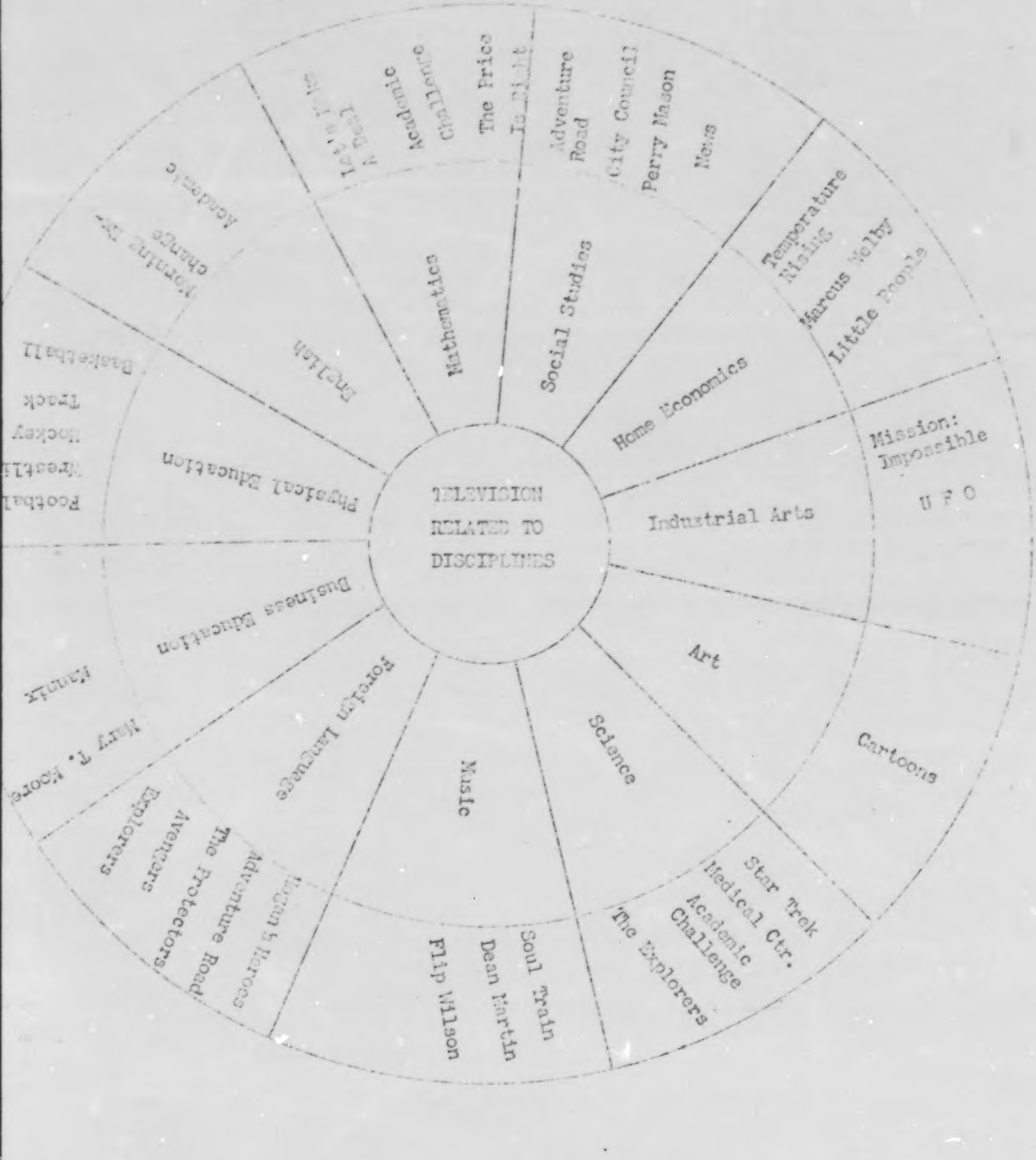

TELEVISION RELATED TO DISCIPLINES
Mathematics
Let's Make A Deal
Academic Challenge
The Price Is Right
Social Studies
Adventure Road
City Council
Perry Mason
News
Home Economics
Temperature Rising
Marcus Welby
Little People
Industrial Arts
Mission: Impossible
U F O
Art
Cartoons
Science
Star Trek
Medical Ctr.
Academic Challenge
The Explorers
Music
Soul Train
Dean Martin
Flip Wilson
Foreign Language
Hogan's Heroes
Adventure Road
The Protectors
Avengers
Explorers
Business Education
Mary T. Moore
Mannix
Physical Education
Footbal
Wrestli
Hockey
Track
Basketball
English
Morning Ex-change
Academic

FIGURE 27

TELEVISION PROGRAMS RELATED TO OCCUPATIONAL CLUSTERS

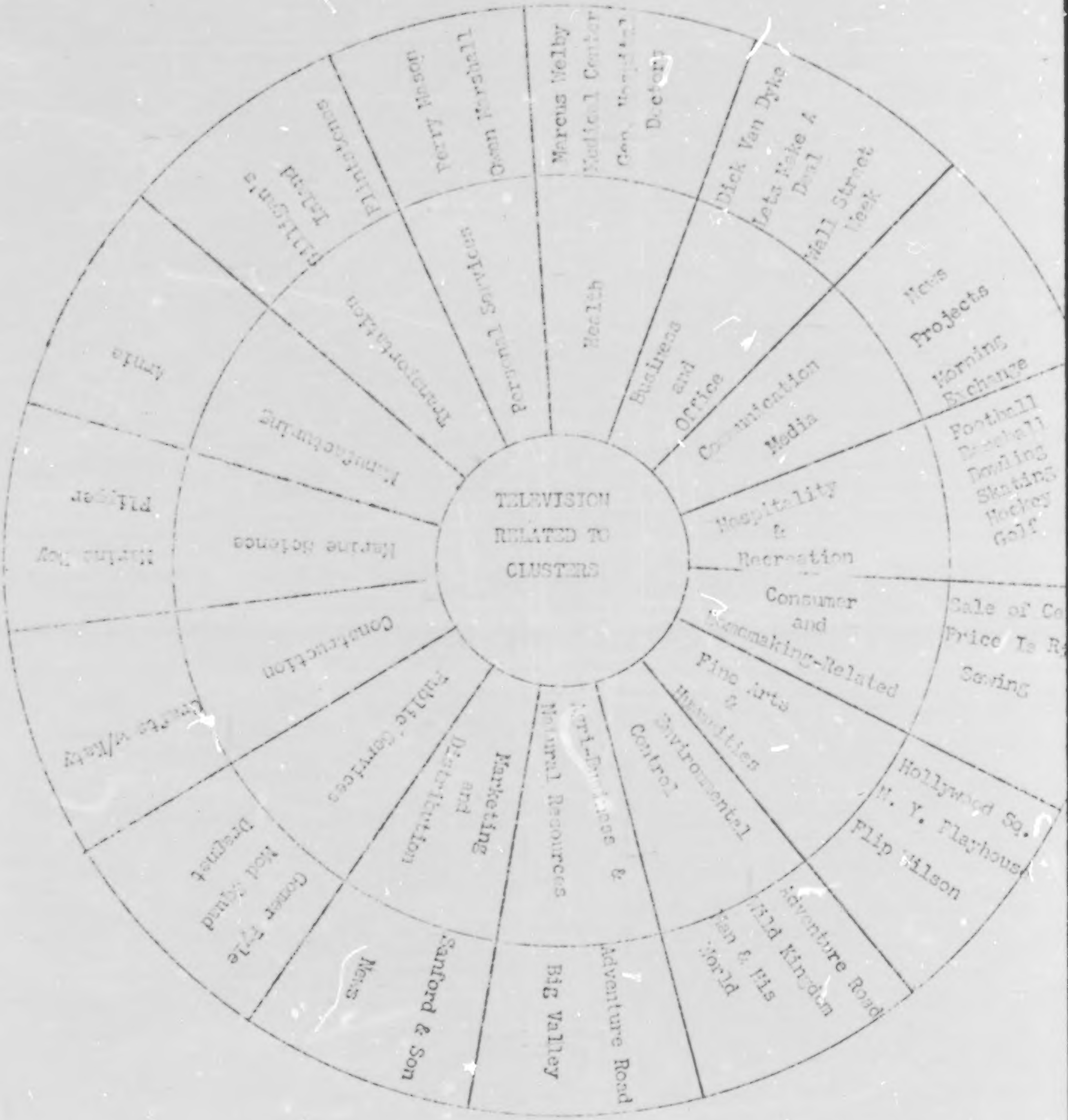

TELEVISION RELATED TO CLUSTERS
Health
Business and Office
Communication Media
Hospitality & Recreation
Consumer and Homemaking-Related
Fine Arts & Humanities
Environmental Control
Agri-Business & Natural Resources
Marketing and Distribution
Public Services
Construction
Marine Science
Manufacturing
Transportation
Personal Services
Marcus Welby
Medical Center
Gen. Hospital
Doctors
Dick Van Dyke
Lets Make A Deal
Wall Street Week
News
Projects
Morning Exchange
Football
Baseball
Bowling
Skating
Hockey
Golf
Sale of Ce
Price Is R
Sewing
Hollywood Sq.
N. Y. Playhouse
Flip Wilson
Adventure Road
Wild Kingdom
Man & His World
Adventure Road
Big Valley
Sanford & Son
News
Gomer Pyle
Mod Squad
Dragnet
Create w/Kathy
Marine Boy
Flipper
Arts
Gilligan's Island
Flintstones
Perry Mason
Owen Marshall

FIGURE 28

RADIO PROGRAMS RELATED TO OCCUPATIONAL CLUSTERS

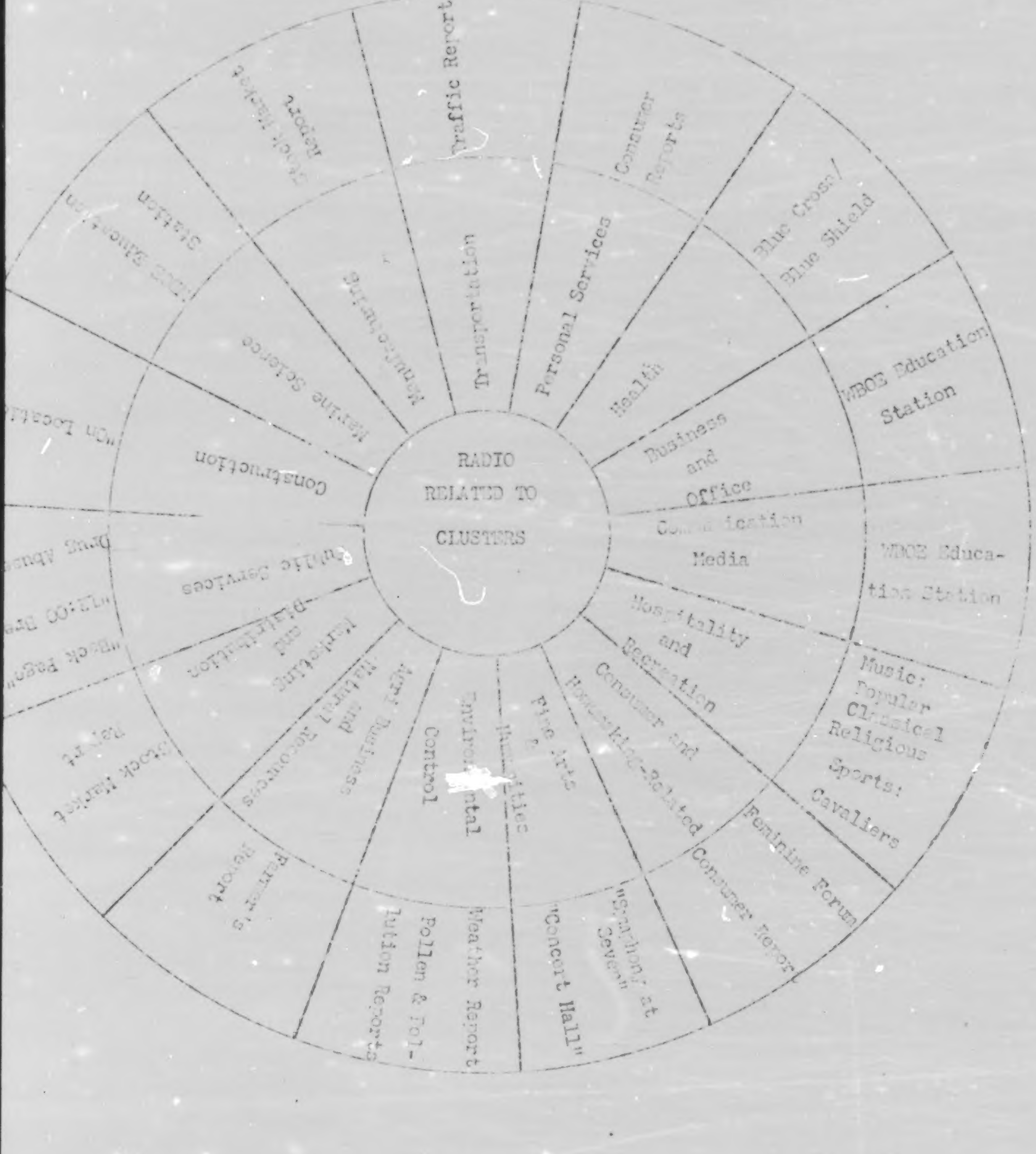
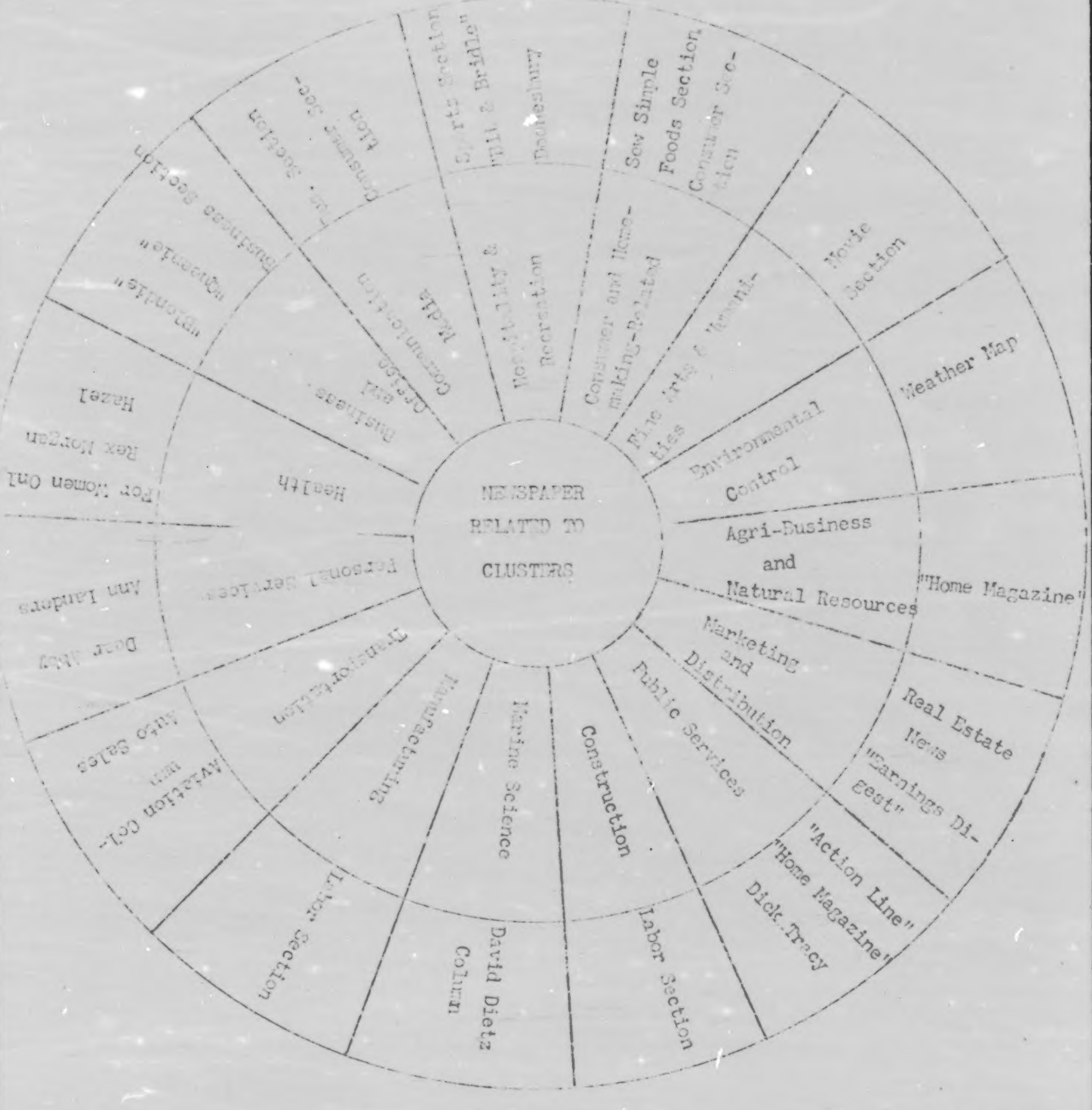

RADIO RELATED TO CLUSTERS
Transportation
Traffic Report
Personal Services
Consumer Reports
Health
Blue Cross/ Blue Shield
Business and Office
WBOE Education Station
Communication Media
WBOE Education Station
Hospitality and Recreation
Music: Popular Classical Religious
Sports: Cavaliers
Consumer and Homemaking-Related
Feminine Forum
Consumer Report
Fine Arts & Humanities
"Symphony at Seven"
"Concert Hall"
Environmental Control
Weather Report
Pollen & Pollution Reports
Agri Business and Natural Resources
Farmer's Report
Marketing and Distribution
Stock Market Report
Public Services
"Back Page"
"12:00 Bre
Drug Abuse
Construction
"On Locati
Marine Science
WBOE Education Station
Manufacturing
Stock Market Report

FIGURE 29

NEWSPAPER RELATED TO OCCUPATIONAL CLUSTERS


NEWSPAPER RELATED TO CLUSTERS
Agri-Business and Natural Resources
"Home Magazine"
Marketing and Distribution
Real Estate News
"Earnings Digest"
Public Services
"Action Line"
"Home Magazine"
Dick Tracy
Construction
Labor Section
Marine Science
David Dietz Column
Manufacturing
Labor Section
Transportation
Aviation Column
Auto Sales
Personal Services
Dear Abby
Ann Landers
Health
For Women Only
Rex Morgan
Hazel
Business Office and
"Blondie"
"Queenie"
Business Section
Communication Media
Fun Section
Consumer Section
Hospitality & Recreation
Sports Section
"Bit & Bridle"
Consumer and Homemaking-Related
Sew Simple
Foods Section
Consumer Section
Fine Arts & Humanities
Movie Section
Environmental Control
Weather Map

plishments must be weighed. By the summer of 1971, when the regional evaluation had been compiled it found that those elementary teachers and the school administrator who had been interviewed and who had been involved with the program voiced strong support for the elementary school component and praised highly the past efforts of the DVEP's teachers and vocational assistants.

Father-Son activities and vocational courses, such as automotive mechanics and building maintenance were established at the East High Annex. Activities included the establishment of career clubs and enrollment of the students in vocational courses.

The local evaluation, conducted in 1971-72 using a control group and a multiple-factor analysis various design, obtained significant results in testing the objective that DVEP students would demonstrate greater knowledge of certain occupational clusters (See figures 30 a-f).

Also tested were the attitudes of DVEP students and control students to certain jobs. In the areas of knowledge, DVEP schools obtained significantly higher achievement than any control schools.

Concerning attitudes, it was found that DVEP males and females were more willing to express more positive preferences for lower prestige jobs and less willing to express high positive preferences for higher prestige jobs.

The evaluation also included information on the organizational aspects of the program. Most teachers and principals who were interviewed at this time indicated a favorable reaction to the concept of developmental education and were favorably impressed with program delivery despite and handicaps mentioned earlier.

In summary of this evaluation the following three results were stated:

1. The empirical investigation indicated that the DVEP did result in significantly greater occupational knowledge for students participating in the program.

2. Program participation affects the perceived preferability of certain jobs. Particularly, the DVEP students were more willing to choose lower prestige jobs. Regarding the students' attitudes toward work-related concepts, the data did show more positive attitudes toward certain specific job concepts.

3. In conclusion, the DVEP project successfully impacted on the target population based on the results for the two outcome objectives.

FIGURE 30a

JOB INFORMATION QUESTIONNAIRE

NAME: ______________________ SEX: __________

SCHOOL: ______________________ GRADE: __________

1. FATHER'S OCCUPATION ______________________

2. MOTHER'S OCCUPATION ______________________

3. WHAT ARE THE NAMES OF THE NEWSPAPERS IN CLEVELAND? ______________________

4. WHAT ARE THE TELEVISION STATIONS ON WHICH YOU CAN WATCH T.V. SHOWS? ______________________

5. NAME THE LARGEST AIRPORT IN CLEVELAND? ______________________

6. NAME THREE AIRLINES THAT FLY TO AND FROM CLEVELAND? ______________________

7. WHAT KIND OF CARD WOULD YOU NEED BEFORE YOU CAN GET A JOB? ______________________

8. HERE ARE SOME THINGS YOU NEED TO DO IF YOU WANT TO FIND AND GET A JOB. SHOW THE ORDER THAT YOU WOULD DO THESE THINGS BY PUTTING A 1 NEXT TO THE FIRST STEP, A 2 NEXT TO THE SECOND STEP, ETC.

   ______ GO TO AN EMPLOYMENT SERVICE

   ______ DECIDE WHAT KIND OF JOB YOU ARE ABLE TO GET

   ______ READ THE HELP WANTED ADS

   ______ GO FOR AN INTERVIEW

   ______ TELEPHONE THE EMPLOYER

FIGURE 30b

9. UNDERLINE THE PLACE WHERE EACH OF THESE JOBS WOULD MOST LIKELY BE FOUND.
FOR EXAMPLE: A REPORTER WORKS AT A NEWSPAPER.

REPORTER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
SPECIAL DELIVERY MESSENGER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
COPY EDITOR	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
INSTALLER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
LINEMAN	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
TRAFFIC MANAGER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
NEWS DIRECTOR	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
SERVICE REPRESENTATIVE	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
PARCEL POST CARRIER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
ENGRAVER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
PRESSMAN	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
MAKE-UP ARTIST	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
CHIEF ENGINEER	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
BROADCAST TECHNICIAN	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
SALES REPRESENTATIVE	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
DIRECTORY CLERK	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
DISTRIBUTION CLERK	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
FOREIGN CORRESPONDENT	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE
WINDOW CLERK	NEWSPAPER	POST OFFICE	TV & RADIO	TELEPHONE

10. WHO TAKES YOUR MONEY WHEN YOU WANT TO FLY ON AN AIRPLANE: ?

______A. RESERVATION AGENT

______B. TICKET SALES AGENT

______C. AIR TRAFFIC CONTROLLER

______D. AIRLINE DISPATCHER

FIGURE 30c

11. WHO TRIES TO MAKE YOU FEEL COMFORTABLE ON BOARD AN AIRPLANE?

____A. FLIGHT OFFICER
____B. CO-PILOT
____C. STEWARDESS
____D. AIRLINE DISPATCHER

12. WHO LOADS AND UNLOADS THE BAGGAGE ON AN AIRPLANE?

____A. FLIGHT OFFICER
____B. RESERVATION AGENT
____C. AIRLINE DISPATCHER
____D. RAMP SERVICEMAN

13. WHO HELPS THE PILOT AVOID HITTING OTHER FLYING AIRPLANES BY GIVING HIM INFORMATION OVER HIS RADIO?

____A. AIR TRAFFIC CONTROLLER
____B. CO-PILOT
____C. FLIGHT ENGINEER
____D. AIRLINE DISPATCHER

14. WRITE THE NAMES OF DIFFERENT JOBS IN A HOSPITAL. FOR EXAMPLE: A DOCTOR WORKS IN A HOSPITAL.

________________________ ________________________
________________________ ________________________
________________________ ________________________

15. WHICH JOB DOES NOT BELONG WITH THE OTHERS?

____A. TELEPHONE OPERATOR
____B. PROGRAM DIRECTOR
____C. SERVICE REPRESENTATIVE
____D. INSTALLER

____A. FLIGHT ENGINEER
____B. RAMP SERVICEMAN
____C. CHIEF ENGINEER
____D. PILOT

____A. PRODUCER
____B. EDITOR
____C. REPORTER
____D. PUBLISHER

FIGURE 30d

THIS IS A LIST OF TWENTY JOBS ON WHICH MEN AND WOMEN WORK FOR A LIVING. READ THROUGH THE LIST TO MAKE SURE YOU KNOW ALL THE JOBS AND THINK ABOUT HOW MUCH YOU WOULD LIKE TO WORK ON EACH OF THESE JOBS. NOW, DECIDE ON ONE JOB THAT YOU WOULD REALLY LIKE TO HAVE MORE THAN ANY OTHER. WRITE THE NAME OF THAT JOB IN THE SPACE NEXT TO "1 - BEST JOB." NOW, DECIDE WHICH JOB YOU WOULD REALLY NOT LIKE TO HAVE. DO NOT WORY ABOUT THE REASON YOU DON'T WANT THE JOB. WRITE THE NAME OF THIS JOB IN THE SPACE NEXT TO "1 - WORST JOB." CONTINUE TO ALTERNATELY CHOOSE BETWEEN THE "NEXT WORST" JOBS UNTIL YOU YOU HAVE WRITTEN THE NAMES OF ALL THE JOBS IN THE SPACES. AS YOU SELECT EACH JOB, DRAW A LINE THROUGH IT SO YOU DON'T CHOOSE IT TWICE.

DOCTOR
ACTRESS/ACTOR
NURSE
MECHANIC (CAR)
TEACHER
POLICEMAN
EXECUTIVE SECRETARY
WAITER/WAITRESS
MODEL
LAWYER
REPORTER
BEAUTICIAN
GARBAGE COLLECTOR
COOK
DISC JOCKEY
STEWARDESS
ELECTRICIAN
AIRPLANE PILOT

1. "BEST JOB" - ______________________
2. "NEXT BEST JOB" - ______________________
3. "NEXT BEST JOB" - ______________________
4. "NEXT BEST JOB" - ______________________
5. "NEXT BEST JOB" - ______________________
6. "NEXT BEST JOB" - ______________________
7. "NEXT BEST JOB" - ______________________
8. "NEXT BEST JOB" - ______________________
9. "NEXT BEST JOB" - ______________________

9. "NEXT WORST JOB" - ______________________
8. "NEXT WORST JOB" - ______________________
7. "NEXT WORST JOB" - ______________________
6. "NEXT WORST JOB" - ______________________
5. "NEXT WORST JOB" - ______________________
4. "NEXT WORST JOB" - ______________________
3. "NEXT WORST JOB" - ______________________
2. "NEXT WORST JOB" - ______________________
1. "WORST JOB" -- ______________________

FIGURE 30e

GETTING A JOB

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

NEWSPAPER REPORTER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTA

CAREER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

MAIL CARRIER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORT

FIGURE 30f

PLAY

OOD ___; ___; ___; ___; ___; BAD
EAK ___; ___; ___; ___; ___; STRONG
AD ___; ___; ___; ___; ___; HAPPY
ISE ___; ___; ___; ___; ___; FOOLISH
RAVE ___; ___; ___; ___; ___; COWARDLY
IRTY ___; ___; ___; ___; ___; CLEAN
IND ___; ___; ___; ___; ___; CRUEL
RTANT ___; ___; ___; ___; ___; UNIMPORTANT

UNEMPLOYMENT

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

TELEPHONE INSTALLER

OOD ___; ___; ___; ___; ___; BAD
EAK ___; ___; ___; ___; ___; STRONG
AD ___; ___; ___; ___; ___; HAPPY
ISE ___; ___; ___; ___; ___; FOOLISH
RAVE ___; ___; ___; ___; ___; COWARDLY
IRTY ___; ___; ___; ___; ___; CLEAN
IND ___; ___; ___; ___; ___; CRUEL
RTANT ___; ___; ___; ___; ___; UNIMPORTANT

EDUCATION

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

Also during the summer of 1972 a liaison worker was hired to assist the Developmental Vocational Education Program staff. He was to be the link between the program and the community by planning meetings with the PTA members who had children in the participating schools. The liaison worker also was instrumental in gathering information and meeting with persons who helped to implement the non-public school phase of the program.

During the fall of 1972, the non-public school phase of the program went into operation. By February, 1973 these schools offered data that indicated increases of the participating students knowledge in certain presented clusters from pre- and - post - test results (See appendex D).

"Operation Shoebox" was implemented in one elementary school. As a hands-on project, the construction of the shoebox enabled the students to utilize many subjects they were studying including math, spelling, English, reading, writing and gave them the opportunity to express their creative abilities.

The project was of an assembly line nature, giving each student the chance to work independently, and to learn skills such as measuring, sanding, glueing, hammering, varnishing and painting. The simple tools involved in these tasks were employed by the student.

The boxes were on display at the school and parents were invited to view them. Occupational clusters related to this project included construction; fine arts and humanities; communication media; marketing and distribution; and business and office.

In the two junior highs and the senior high, field trips, speakers, audio-visual aids and the career information library were made available as they were in the elementary schools. Also, at one junior high a production woodshop achieved some success.

The major accomplishment of the junior and senior high schools involved the injecting of the project into the various disciplines. Thus, the students were able to relate the subjects they were taking to real occupations. Also the co-ordinating teacher and his aides were available to give the students individual and/or group career information and counseling.

In the three upper level schools a total of 3,358 students participated in the program.

Accomplishments of the Developmental Vocational Education Program project must necessarily consider the curricula and materials developed to implement the program. Elementary, junior and senior high curricula were developed for most of the fifteen occupational clusters. The elementary curriculum includes lesson plans and pre-and post tests. The junior and senior high curricula include lesson plans along with some pre-and post-tests.

To facilitate different aspects of the curricula, field trips were taken which not only helped with the presentations but enriched the lives of the Model Cities area students.

In appreciation of these field trips "Certificates of Appreciation" (See figure 31) were sent to the various companies' representatives who assisted in these endeavors.

As an audio-visual aid for general use and substitute for certain field trips, sound-slides were developed for the clusters.

Transparencies were developed to aid in the orientation of staff. Others were developed for class presentations at the various levels.

To supplement the field trips, sound slides, transparencies, and curriculum, posters were developed and appropriate filmstrips made available.

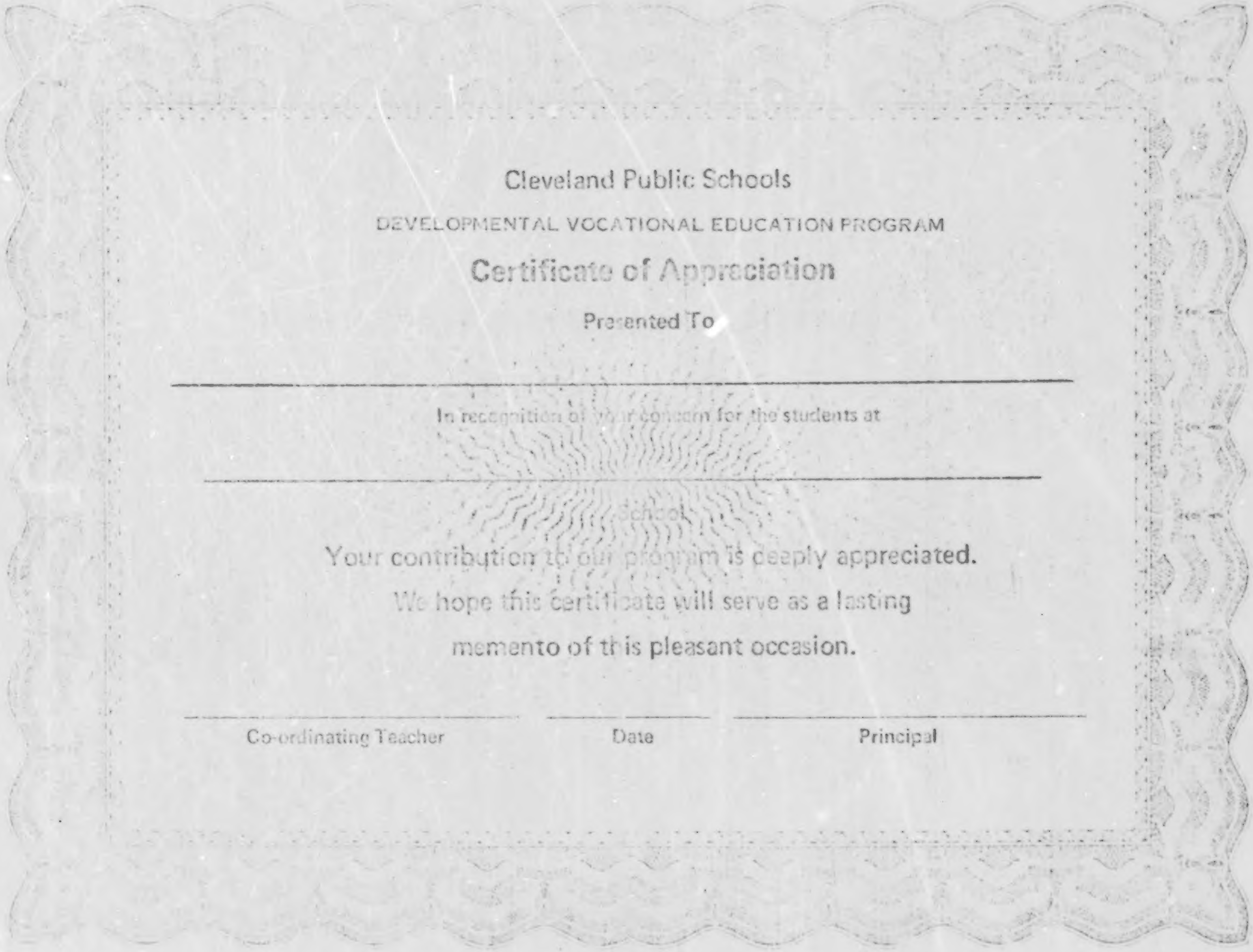
As the Developmental Vocational Education Program was set up, the vocational aides were to be enrolled in Cuyahoga Community College on a part-time basis during the school year and full time during the summer in order to advance their knowledge and skills. The Developmental Vocational Education Program was to pay the aides tuition.

As a requirement for being involved with the program, the aides had to be successfully working on their college program. While most of the aides experienced some difficulty in college, only one found it necessary to withdraw from the Developmental Vocational Education Program due to failing grades.

Some material that was used in the various curricula included information that had been prepared from the use of the advertising section of the telephone book.

Other material reflected information compiled from a survey of a Cleveland newspaper (See figure 32). The results of the newspaper survey supplied supplemental data for curricula development. It was noted that the jobs people are willing to do, do not coincide with the availability of positions and that students would have to be made aware of the

FIGURE 31



Cleveland Public Schools

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

Certificate of Appreciation

Presented To

____

In recognition of your concern for the students at

____

School

Your contribution to our program is deeply appreciated.
We hope this certificate will serve as a lasting
memento of this pleasant occasion.

______________ ______________ ______________

Co-ordinating Teacher Date Principal

FIGURE 32

Newspaper Survey of

Help and Position Wanted Ads

Help Wanted -- Males

30% - Marketing and Distribution Occupations
15% - Public Services Occupations
14% - Transportation Occupations
10% - Business and Office Occupations
9% - Hospitality and Recreation Occupations
7% - Manufacturing Occupations
6% - Personal Services Occupations
3% - Communications Occupations
2% - Construction Occupations
2% - Health Occupations
2% - Fine Arts and Humanities

100%

Help Wanted -- Females

27% - Business and Office Occupations
23% - Marketing and Distribution Occupations
15% -- Public Services Occupations
12% - Hospitality and Recreation Occupations
7% - Personal Services Occupations
5% - Health Occupations
5% - Communication Occupations
4% - Manufacturing Occupations
2% - Fine Arts and Humanities Occupations

100%

Position Wanted -- Males

31% - Construction Occupations
15% - Transportation Occupations
15% - Marketing and Distribution Occupations
15% - Miscellaneous Occupations
8% - Business and Office Occupations
8% - Health Occupations
8% - Hospitality and Recreation Occupations

100%

Position Wanted -- Females

57% - Personal Services Occupations
43% - Business and Office Occupations

100%

occupational areas in demand in order to train for jobs that offer employment.

Finally, basic to all levels and each of the schools was the establishment of a career information center. These centers served as a reference for pupil inquiry in addition to the aide or in his absence.

6 E.

Evaluation of Project-Prepared by Third Party (See Appendix C).

6 F.

Generally it can be said that in spite of the problems incurred, the Developmental Vocational Education Program had more successes than failures in improving the occupational knowledge and attitudes of participating youth. The program had impact in the elementary schools. As for the junior and senior high levels, while the program achieved some successes at these levels, it needs more than a one year trial. Certainly if the program had been in operation longer, more definite conclusions could be drawn.

In the future, the 'people" of the project should be expanded to include all grades, K-12. At the elementary level the project should not be limited to the social studies curriculum as not all students might be enrolled in it. If the program were expanded to a K-12 basis, starting in the elementary grades the children could be involved in simple hands-on projects that would build skills, co-ordination, enhance their self images through production and help form their concepts about work having an inherent dignity. As the child progressed on to graduation and a job, these concepts, skills and information could be added to with the result being a better equipped citizen with more specialized skills and knowledge than one who had not taken part in the total program.

A problem that needs to be resolved and that has implications for future projects is the need for early funding. Earlier funds would allow sufficient time to procure materials, develop teacher guides and start the orientation of staff.

A similar problem to be resolved would be the hiring of personnel. One of the stipulations in the project design was that the vocational aides be hired from residents within the Model Cities Area. With this stipulation in mind, the aides were hired from said area. In the future, more time and funds should be expended in order to secure more experienced and/or better qualified staff members.

The personnel would need more time for orientation and an orientation more substantive in nature than just observing teachers. The vocational aides need not only teaching skills, but vocational skills that will allow them to initiate more "hands-on" project.

Another problem with personnel needs to be resolved in the future. The work load at the junior and senior high level is too much for just one co-ordinating teacher. Considering the number of students involved and relating work and responsibilities, in the future, it might be best to have two co-ordinating teachers, one for each level.

The Developmental Vocational Education Program involved a sufficient amount of work to have employed a full-time project director. This is not meant as an aspersion on the project's director. It just points out that because of his other duties, he was not able to devote his full time, capacities and energies to the project's success.

Better orientation of the participating teachers and administration is also required. This group really needs a high-powered presentation (s) that will "sell" them on the project and clarify misconceptions concerning the use of the aides. If this group is enthusiastic, it can give the vocational aides the support they need. Also, if "sold", the teachers will enhance and expand aide presentations for the students' betterment and assist in securing parent participation.

As a recapitulation the basic strengths and weaknesses of the program can be stated as follows: Strengths of the Program.

1. The use of a developmental program which started in the upper elementary schools.
2. The use of the cluster and discipline concepts.
3. The opportunity of the students to develop positive attitudes toward the world of work in general and various specific occupations.
4. Senior high students involved in on-the-job training.
5. Program designed as a child-centered activity.
6. Enrichment of Model Cities area students' world through speakers, field trips and other supplemental activities.
7. The development of audio-visual aids, many of which centered on Cleveland and highlighted the opportunities that are here rather than far away.

8. Establishment of a career information center in each of the participating schools.

Weaknesses of the Program:

1. Late funding
2. Insufficient number of personnel
3. Lack of in-depth orientation of staff prior to program implementation
4. Insufficient orientation of participating teachers
5. Insufficient time allotted for junior and senior high operations prior to project termination.
6. No provision for the evaluation of participating teachers
7. Little or no parent participation

The Developmental Vocational Education Program materials that have been developed and the equipment purchased shall continue to be used. The materials will be used for supportive service to an on-going career education program in one attendance center in Cleveland. This center includes one senior high school, all junior high schools and the elementary schools. These supportive services will be extended to all students participating in the education program of that school attendance center.

The equipment as well as the materials (See appendices A & B), will be used in the staff orientation and implementation of a career education program. Additional sound slides and other materials will be provided as the need arises. The career information center in the library of each school will also be maintained to provide an on-going reference for students.

APPENDIX A

BIBLIOGRAPHY

APPENDIX A

BIBLIOGRAPHY

Occupational Outlook Handbook
U.S. Department of Labor
Bureau of Labor Statistics
Washington, D. C.

This handbook is a guide to employment opportunities in a broad range of occupations that covers all the principal areas of work. It brings together information of significant for those who are planning a career. Service as a basic tool in the vocational guidance process. We use this guide to gather comprehensive information on career opportunities.

Career Opportunities
New York Life Insurance Company
Box 51, Madison Square
Station New Yor, N. Y. 10010

Soft back book compared of a series of articles designed to help guide young people to a better future. These books are easy reading materials. They are used as a part of our careers library. We fine it good in that our students can easily relate to it, each article is based on the experience of one who has distinquished himself in his respective field.

English On The Job
Jerome Carlin
Golbe Book Company, Inc.
New York 10, New York

This book capitalizes upon that interest by organizing the English activities around a core of vocational guidance. We use it because it not only improve the students own english expression; they also gain insight into knowledge of some of the problems he will face in choosing his course. The students learning proceeds simultaneously in two directions: Toward a better understanding of his potentialities in the world of work and toward a better command of the communication skills needed in all phases of everyday living.

The Story Steel
United State Steel Corporation
600 Grant Street
Pittsburgh, Pa. 15219

A pamphlet style book which describe how steel was made. We use it to stress the importance of steel, it takes you from smelting of metal in prehistoric through the fascinating development of the iron

making processes.

The Epic of Steel
United State Steel
Public Relations
100 Erieview Plaza
Cleveland, Ohio 44114

This is a resource book used to get more detailed information about the steel industry.

Your Future In Daily Newspapers
American Newspaper Publishers
Association Foundation
750 Third Avenue
New York, New York.

This is an easy to read material describing the jobs in the newspapers field. It is used as a part of our career library.

Hospitality Program
(Food Service & Lodging Ed.)
Council on Hotel, Restaurant and
Institutional Education (1970)
1522 K. Street, N.W.
Washington, D.C. 20005

This book is used to gain information in the area of good service and lodging. It explains the requirements one need if he or she is interested in managing a large hotel or motel. It also explain how one might go about getting into the areas of food catering.

Health Careers
The Greater Cleveland Hospital Association
1001 Huron Road
Cleveland, Ohio 44115

This guide provides minimum basic entry information about allied health education programs in Northeast Ohio. We have used this booklet as a reference tool for seeking information about an approved health career program. It explain in details the jobs available, the requirements, the grants available and suggestive places for training.

Aim High Vocational Series
Richards Rosen Press, Inc.,
New York, New York

The Aim High Vocational Guidance series is for the young person who is looking for a job. All of the books are written by experts in the occupations who know what the jobs are about. The series covers all those occupations have opportunities for young people and will help them to make decisions concerning them.

Careers In Depth
Richards Rosen Press

This series covers all the careers in practical terms for the young man or woman who is interested in more than just a job. All books were written by prominent men and women who are successful in their chosen fields.

Handbooks Of Job Facts
Scientific Research Associates

An occupational summary which helps to pin point the basic features and trends of a variety of significant occupations; contains concise summaries of basic data on 300 major occupations.

Industrial and Commerical Wiring
Kennard C. Graham
American Technical Society - Chicago, U.S.A.

This book has been rewritten to reflect the latest developments in the electrical field; covering new techniques and materials, and incorporating the latest additions and changes in the National electrical code. Its especially good that it begins with basic lighting terms and principles. Study guide also accompanies the book.

Electrical Construction Wiring
Walter N. Alerick
American Technical Society, Chicago, Ill 60637

This book includes the latest accepted changes in wiring, also the more traditional wiring precedures that are still recognized by the NEC. The text is very suitable for self-study. Questions are found at the end of each chapter for personal check up, classroom discussion, or assignments. They are designed to reinforce the information given in the chapter and to aid in giving directions for the review of the material in the chapter.

Related Mathematics For Carpenters
L.S. Chamberlain
American Technical Society

This book deals with mathematics as it relates to a practical occupation. The authors teaching experience demonstrated that students found it easy to learn mathematics when the materials consisted of realistic problems such as one might encounter on a job.

Automotive Maintenance and Trouble Shooting
Leslie F. Goings and Edward D. Spicer
American Technical Society
Chicago, 60637

This hard back book isbasedupon three main objectives (1) To show how to prevent most troubles; (2) to find out how to quickly and acquately locate cause of any trouble; (3)once itis known what is wrong, to show how to restore the car to satisfactory operations.

A Guide To Professional Careers
Walter Duckat
Julian Messner, a division of Simon & Schuster Inc.
New York, New York, 10018

This book is as it said a guide to professional careers. Many careers are mentioned in this book for college-bound students. The requirements, training, duties, salaries and future outlook for each career are clearly detailed, with helpful cross references to other closely related professional careers. The book is unique in that each career description includes questions to determine the reader's interest in and capabilities for the profession.

How To Plan A House
G. Townsend & J. Dalzell

A multi-purpose book written in a practical and authoritative manner. Designed to instruct the layman on house planning intelligently, the books is also written to be of value to builders, developers apprentices and students wishing basic information on planning. The book provides an entire course in design in the residential field presenting plans, how plans are made, and factors involved in shoping plans?

Machine Shop - Operations & Setups
Porter Lascoe, & Nelson

A text written by professionals in the field, with the purpose of providing basic training in conventional machine operations and information regarding the lastest developments and machine book business. The book also includes the student with innovations which will come into use in the buture using illustrations and language basic to the trainee.

Concrete Block Construction: For Home & Farm

J. Dalzell, Townsend

A guide written by professionals working in the field which carries the reader step by step through experience tested methods of erecting a structure designed to eliminate common errors in the use of concrete blocks, this book is filled with instruction valuable to the beginner as well as the mason inexperienced with the concrete blocks.

Steel Square

Townsend

A "how to do it" book with detailed instructions and illustrations for the carpenter or helper on the use of the steel square. This book is compiled in such a way as to explain lines and angles in a simple and practical manner; answering questions from "what is a steel square" to "how to building a roof". A valuable look in any carpenter's handbook.

APPENDIX B

INSTRUMENTS USED

APPENDIX B

INSTRUMENTS USED

S. R. A. Occupational Exploration Kit
Science Research Assoiates
Chicago, Illinois 60611

The occupational kit provides tudents with a systematic approach to job investigation. One important part of his kit is the scanner. The scanner is a coding device which help the student chose an occupational area that he will most likely qualify for in accordance to interest, ability, and education. This kit also include illustrated occupational briefs describing specific career areas.

S. R. A. Work (widening occupational kit)
Science Research Associates
Chicago, Illinois 60611

The Work Kit is used to help students expand their knowledge of the world of work, to recognize families of related jobs, to develop a deeper understanding of his own abilities and interests, and to learn about the type and extent of education needed to prepare adequately for various occupations. This kit also has five colored filmstrips that we used as an introduction to the world of work and to the many types of people who are a part of it.

Title of filmstrips

(1) Who Are You?
(2) What Do You Like To Do?
(3) What Good Is School?
(4) What Is A Job?
(5) What Are Job Families?

Language Development Kit (S. R. A.)
Chicago, Illinois 60611

This kit is composed of many large charts. Each chart depicts a differenct vocational area. Each set of charts has a space for new words to be added. Pens with erraseable ink are also included. Each set of charts provided pictures that students can easily related to and very readily write themes on.

3M Sound - Slide Machine
Minnesota Mining and Manufacturing Company

The 3M Brand Sound-Slide concept provides a complete automatic presentation which characterizes slide tape or slide talk programs. The machine is easy to operate and maintain, it combines in one compact unit all the features of a 35MM slide projects and a magnetic disrecord and sound play back. We are using this machine to show slides we took of local agencies. With the machine comes a impact tray which holds up to 36 slide frames. The machine is good in that it stops, repeats and records depending on the person operating it and the material being stressed. The most important facts is that we show our own slides and narriate our own sound discs.

Camera Konica C. 35
Appliance City
Cleveland, Ohio

This camera is pocket size automatic that we've used to photograph local vocational industries. The photographs are developed in the form of a slide. Each slide is mounted on a single strudy frame and its accompanying magnetic sound track. They are later used on our 3M Sound-Slide Machine.

Chronicle's Occupational Library
Chronicle Guidance
Publications, Inc.
Morauia, New York 13118

This library consist of a collection of occupational information field in an unique system based on D.O.T ("Dictionary of Occupational Titles").

Occupational Briefs	The briefs are revised frequently to keep all information current. Our four hundred titles are now available.
Reprints	Reprints are taken from many technical publications. They give word pictures of occupations as seen by people working in them.
Posters	Posters deal either with occupations described in the briefs or with career and educational topics.
Other Materials	Include booklets, pamphlets, and brochures from government and business sources.

Cassette Tape Player & Recorder
Rheem Califone AV 80
Harpster Audio Visual Equipment Inc.
Cleveland, Ohio

This instrument was used to record classroom activities and discussion to be retained for playback. Complete talk shows were recorded during a class seccession. Commericals and all were entitled in this talk show, this done in connection with our communication cluster. This instrument was also use to transer voice into our sound slide system.

Educational Resources Division: The World of Work
Educational Design Inc.
47 West 13th Street
New York, New York 10011

The instrument consists of three kits of materials:

1) On The Job, 2) Getting A Job, and 3) Cross Vocational Skills and information. Each kit contains lesson and discussion cassette tapes along with student work books. The lesson tapes and student work books work equally well on an individual or group basis. The discussion tapes serve as spring boards for class discussion and role-playing. We used these kits in the senior high classes.

Overhead Projector: Buhl 80/14

We used this instrument to show transparencies during staff orientations and classroom presentations.

Thermofax Transparency Maker - 3M
Minnesota Mining & Manufacturing

With this instrument we produced many of the transparencies that were used in staff orientation and classroom presentations.

16MM Projector: Singer Graflex 16

This machine was used to show the various films available to the students.

Dukane Sound Filmstrip Projector: A-V Matic

This automatic sound filmstrip project has a TV style screen and plays the record which accompanies the filmstrip. It was used for individual and small group instruction at all levels.

SRA Knowledge Needed To Obtain Work (KNOW)
Science Research Associates
Chicago, Illinois 60611

. This teacher-counselor guide included transparencies to help students obtain their first job. Units included: filling out an application, where to seek work and taking a test.

Career Education Series: Popeye Comic Books
King Features
235 East 45th Street
New York, N.Y. 10017

The comic books cover each of the various fifteen clusters. This materials combines high interest information with elementary school vocabulary. While we have used these primarily in the elementary grades, they can readily be used in the junior and senior highs for the slow or non-reader.

APPENDIX C

EVALUATION

Human Services Design Laboratory

School of Applied Social Sciences
Case Western Reserve University
CLEVELAND, OHIO 44106

AN EVALUATION OF THE DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

August, 1973

Lawrence Pitterman
Vashti Adger
Gregory O'Brien

Summary of Final Report

The Human Services Design Laboratory (HSDL) performed an independent evaluation of the impact and effectiveness of the Developmental Vocational Education Program (DVEP) in cooperation with the Division of Research and Development, Cleveland Public Schools.

The overall goal of the DVEP project was to create a bridge between school and earning a living for students in the Model Cities area. This would be done through a career development program beginning in elementary school and continuing through high school. It would provide students with a broad base of vocational information and exploratory experiences on which to base career decisions; with skill training to enable them to secure employment or to undertake future training in the field of their choice; and with actual job placement. Thus, the program was designed to increase options for making occupational decisions; to eliminate real and imagined barriers to attaining job skills; and to enhance learning achievement in all subject areas and at all educational levels for the youth in Model Cities area schools.

The evaluation effort involved three distinct phases:

(1) Specification of the appropriate program outcome objectives to be evaluated and examination of the organizational processes required for program delivery.

(2) Development of meaningful and reliable measurement instruments to assess program outcomes.

(3) Empirical evaluation investigation in which students from the participating DVEP schools were compared with a "matched" sample of students from non-DVEP schools.

Evaluation Objectives

Based on a review of the proposed program objectives and their applicability to the status of program implementation in May, 1972, two evaluation objectives were identified:

Objective 1: Experimental (DVEP) and control students will be compared on their specific and general knowledge relating to certain occupational clusters. Successful program implementation should result in significantly higher scores for the experimental (DVEP) students on achievement measures of this knowledge.

Objective 2: Experimental (DVEP) and control students will be compared on their preferences for certain jobs and on their attitudes toward the world of work. Successful program implementation should result in significantly more positive attitudes for experimental (DVEP) students toward the world of work. Significant differences in the expressed job preferences also should be obtained.

Instrument Development

Since the assessment of the DVEP project involved both achievement and attitudinal evaluation objectives, instrument development was directed toward obtaining meaningful and reliable measures for these objectives.

The primary emphasis of the data analysis for the content measures was on obtaining high internal-consistency reliability. Using two types of item analysis, item-difficulty and item-total correlation, two achievement measures were developed. The internal-consistency reliability for both measures was approximately .85. This is well above the required level of acceptability.

The data analyses for the attitudinal portions of the evaluation instrument first examined the administrative applicability of the measurement techniques. Although a departure from typical attitude measures, the alternation ranking procedure yielded differential information about job preferences. A more conventional measure, the semantic differential, was employed to obtain attitudes toward world of work concepts. Revised on the basis of factor analysis data, its final form included eight work related concepts which were rated on eight bipolar adjective scales. The use of a single summed score for these scales also resulted from the factor analyses.

The evaluation instruments both called the Job Information Questionnaire, included content, ranking and semantic differential measures.

Empirical Evaluation

The evaluation instruments were administered to the fifth and sixth grade students who had participated in the first year of the DVEP project (experimental group), and to a comparable group of students who were not in the program (control group) on three separate occasions: June, 1972; February, 1973 and June, 1973. Using this pre- and post-test, "matched" control group research design, the program objectives were evaluated.

Key Results - Objective 1

1. Employing a multiple-factor analysis of variance design, the main factor of program participation was significant, Experimental (DVEP) schools obtained significantly higher achievement than control schools. This was true for the entire evaluation period.
2. The same design also indicated that the main factor of grade level was significant. Sixth graders obtained significantly higher scores than fifth graders. This was also true for the entire evaluation period.
3. Beyond the effect of each of these main factors, the combination of both factors also was found to be significant in the initial project evaluation. The difference in obtained scores between fifth and sixth graders was smaller in the experimental (DVEP) schools than in the control schools for the June, 1972 testing.
4. The level of performance on the achievement measure was not consistent across all the experimental (DVEP) schools. A large variation in mean scores was obtained.

Key Results - Objective 2

Job preference comparisons between experimental (DVEP) and control groups were made using male and female subgroups. Mann-Whitney U tests were performed to identify differences in the distribution of ranks given to each job. Attitudes toward various world of work concepts in a semantic differential were analyzed with a factor analysis of variance design.

1. Experimental (DVEP) males assigned significantly higher ranks to the jobs of Policemen, Executive Secretary, Garbage Collector, Cook, Teacher (second administration) and Waiter (third administration) than did control males.
2. Control males assigned significantly higher ranks to the jobs of Lawyer, Actor (second administration), Electrician (second administration) and Doctor (third administration).

3. Experimental (DVEP) females also assigned significantly higher ranks to the jobs of Garbage Collector (first and second administration) and Cook, Policeman (second administration), and Airplane Pilot (third administration) than did control females.
4. Control females assigned significantly higher ranks to the jobs Doctor, Actress, Electrician, Executive Secretary (second administration) and Model (second administration).

This data pattern may suggest that both experimental (DVEP) males and females were more willing to express more positive preferences for lower glamour jobs, e.g. Cook, and less willing to express high positive preferences for higher glamour jobs. These job preferences were not stable, and this conclusion is quite tentative.

5. Significant effects for the main factor of program participation were obtained for the semantic differential concepts of Reporter Mail Carrier and Telephone Installer (second administration). Experimental (DVEP) students expressed more positive attitudes toward these concepts than did control students. Again these effects were present in no more than one evaluation phase.

Organizational Evaluation

A secondary goal of this project evaluation was to examine the current status of program implementation and the organizational processes required for program delivery. In general, program implementation has adhered to the original program proposal. Certain external constraints placed on the project restricted a more complete implementation of activities in the academic year beginning September, 1972 .

Most teachers and principals with whom interviews were held indicated a favorable reaction to the concept of developmental education and were favorably impressed with program delivery. However, discussions with the DVEP staff and on-site observations, in addition to these interviews, identified two issues in the first year's program delivery. The first involved the skill development of the Vocational Aides and their role in the classrooom beyond the actual DVEP presentations. The second involved the relationship between the DVEP material and the Social Studies curriculum into which it is injected. The increase in the Coordinating Teachers' field activity the following year seemed to address the first issue.

The knowledge of the termination of the DVEP project in October, 1972 reduced the real effectiveness of the project by a substantial period of time. The combination of project "gear-up" and project "phase-down" probably limited the real impact of the DVEP program to the Spring, 1972 and early Fall, 1973. Whether the increasingly negative organizational climate in the second year had an effect on the magnitude of the empirical outcome cannot be judged.

Summary and Conclusions

The primary goal of the DVEP evaluation was to assess the effectiveness of the program in meeting two outcome objectives. The first objective was based on an outcome originally defined for program implementation at the upper elementary school level: Successful program implementation would result in greater knowledge relating to certain occupational clusters. The empirical investigation indicated that the DVEP project does result in significantly greater occupational knowledge for students participating in the program. However, this result was not uniform in each of the participating schools.

The second outcome objective identified for evaluation was that successful program implementation would result in more positive attitudes toward work related concepts and differences in expressed job preferences. While differences in job preferences were obtained between the experimental and control groups, these differences were not stable for the entire evaluation period. This was also true with regards to the student's attitudes toward work-related concepts. While the data did show more positive attitudes toward the specific job concepts of Reporter, Mail Carrier and Telephone Installer for the DVEP students, these results did not occur through the entire period of evaluation. Most of the significant attitudinal results occurred in the first evaluation period.

In conclusion, the DVEP project successfully impacted on the target population for only knowledge outcome objective.

INTRODUCTION

The Division of Research and Development, Cleveland Public Schools, contracted with the Human Services Design Laboratory (HSDL) to evaluate the impact and effectiveness of the Developmental Vocational Education Programs (DVEP). The evaluation activities occurred over an eighteen month period from late February, 1972 to August, 1973. Three major components of the evaluation can be identified:

(1) Specification of evaluation objectives and organizational overview: The goals of this initial evaluation phase from February, 1972 to April, 1972 were to determine the program outcome objectives appropriate for evaluation and to examine the organization processes required for program delivery. Evaluation tasks included reviewing written DVEP materials, interviewing DVEP staff, participating classroom teachers and school principals, and conducting on-site observations of program delivery. Contact with the DVEP staff during the second full academic year of the project, September, 1972 to June 1973, yielded additional information regarding the effectiveness of program delivery.

(2) Instrument development: In order to assess program outcomes, meaningful and reliable outcome measures were required. The first development of evaluation instruments occurred in May, 1972. Subsequent revision of these instruments occurred in December, 1972.

(3) Empirical evaluation investigation: The evaluation instruments were administered in June, 1972, February, 1973, and June, 1973 to assess the impact and effectiveness of the DVEP project. The data obtained from

students participating in the DVEP project was compared to the data obtained from students not participating in the DVEP project. The comparison groups were similar in age, socio-economic status, and previous educational background. An interim report based on the results from the June, 1972 administration was submitted in September, 1972. (See Appendix A for the summary abstract of the report.)

Evaluation Objectives

Two program outcomes -- which would result from successful program implementation -- were selected for empirical evaluation to assess the impact and effectiveness of the DVEP project. The identification of these evaluation objectives was based on a review of the proposed program objectives and their applicability to the implementation status of the DVEP program.

Objective 1: Experimental (DVEP) and control students will be compared on their knowledge of specific and general information relating to certain occupational clusters. Successful program implementation should result in significantly higher scores for the experimental (DVEP) students on an achievement measure of this knowledge.

Objective 2: Experimental (DVEP) and control students will be compared on their preferences for certain jobs and on their attitudes toward the world of work. Sucessful program implementation should result in significantly more positive attitudes for experimental (DVEP) students toward the world of work. Significant differences in the expressed job preferences also should be obtained.

The following sections present the overall DVEP program description on which these evaluation objectives were based. An overview and evaluation of the organizational processes employed in program delivery is also presented. The commitment of the HSDL team to process observations and their evaluation represent a secondary goal of this evaluation effort.

PROGRAM DESCRIPTION

DVEP Objectives

The overall goal of the DVEP project is to create a bridge between school and earning a living for students in the Model Cities area. This would be done through a career development program beginning in elementary school and continuing through high school. It would provide students with a broad base of vocational information and exploratory experiences on which to base career decisions, with skill training to enable them to secure employment or undertake future training in the field of their choice and with actual job placement. Thus, the program is designed to increase options for making occupational decisions; to eliminate real and imagined barriers to attaining job skills; and to enhance learning achievement in all subject areas and at all levels of education for the youth in high poverty Model Cities area schools.

The program is developmental in nature and pyramidal in design. It begins with a broad informational/organizational approach at the elementary level, which narrows to an exploratory/preparational approach at the senior high level. Such an approach is designed to put the student at each level in a position to make informed decisions as to the next step in his career development and successively narrow his vocational preference.

Beginning at the upper elementary school level, students in grades five and six would acquire reliable and valid information on the broad range of available occupations and their requirements. The emphasis would be on occupational clusters rather than on specific jobs, and would include future occupational areas which are expected to emerge as a result of new technology. The students would become oriented to the world of work through multi-faceted experiences including field trips, work simulation games and role playing, and would obtain experience in basic job skill operations.

At the junior high school level, the explorational aspect of the program involves learning the functional interrelationships among the production, management and service areas of business and industry. Students would sample the operations and skills required in a number of occupations through work site tours and actual experience.

Finally, at the senior high level the program orientation is toward the preparation for actual job placement beyond school. Students would move from exploratory experiences in a number of occupational areas to intensive training in one skill area of their choice. High school students would get on the job experience in a work study program.

Several specific outcome objectives relative to this program design can be identified. These are:

(1) increased ability to identify and describe a variety of occupations in in a broad array of occupational areas (elementary school level).

(2) increased knowledge of the operation of basic tools and equipment in various occupations and their utility (elementary school level).

(3) increased knowledge of the operations of and functional interrelationships among management, production and service areas of business and industry (junior high school level).

(4) increased knowledge of the operations involved in a wide variety of occupations (junior high level).

(5) increased ability to describe the relationship between specific vocational activities and "real" occupations (junior high school level).

(6) increased positive attitudes toward vocational education (senior high school level).

Two additional objectives specific to the senior high school level were in the original proposal for the program but were subsequently renegotiated and eliminated.

DVEP Personnel and Responsibilities

The following personnel are involved in the service delivery of the DVEP project. The Project Manager directs and supervises the entire project. Four Coordinating Teachers are responsible for developing workable outlines and lesson plans for the occupational clusters which are presented through the Social Studies and Language Arts curricula. This involves obtaining detailed information on the job families for classroom activities, developing appropriate sound slides, purchasing occupational films, arranging for classroom speakers organizing and supervising field trips, and providing other materials as needed by the Vocational Aides and classroom teachers. The Coordinating Teachers also serve as supervisors for the Vocational Aides. This responsibility includes duties relating to both achieving specific DVEP objectives and acting as a resource for Aides' career development. Finally, the Coordinating Teachers are responsible for interpreting the project proposal and relating it to the Aides, school principals and classroom teachers.

It is through the Vocational Aides that the actual contact between the program and the students is made. In conjunction with the classroom teachers, they present the study units on the world of work, direct appropriate classroom activities such as simulation games, show films and sound slides and stimulate classroom discussion. To prepare for their classroom presentations, the Aides team with their respective Coordinating Teachers (three or four Aides per Teacher) in developing the occupational cluster study units and classroom activities and assist in securing outside speakers. Both the Aides and Co-ordinating Teachers also develop and administer pre- and post-tests to evaluate the students after the completion of each occupational cluster.

The use of Vocational Aides represents a unique and critical aspect of the DVEP project. An organizational objective for the project is to provide an opportunity for career upgrading for these individuals. Specifically, the DVEP project would provide a system for training individuals from the Model Cities area to become teachers. The Aides would obtain practical classroom experience from working with the DVEP classes while enrolled at Cuyahoga Community College for night and summer courses leading to a degree in education. Thus, their training would result in educators equipped to work with Inner City children and who will choose to continue their careers in disadvantaged area shcools.

Project Implementation

The DVEP project was implemented at the upper elementary school level, grades 5 and 6, during the academic year of September, 1971, to June, 1972. The Aides were assigned to the ten elementary schools to be served by the DVEP and, in early October, 1971, began class presentations. Project implementation at the junior high school and senior high school levels was delayed until September, 1972 due to the temporary dissolution of the Model Cities board, whose approval was required for the necessary additional staff.

ORGANIZATIONAL OVERVIEW AND EVALUATION

The initial activities of the HSDL team were directed toward obtaining a general overview of the DVEP project as it had been implemented during the academic year beginning September, 1971. These initial activities also served the important function of introducting the HSDL team in its role as the independent evaluator. Further contact during the second academic year of the evaluation, September,1972 to June, 1973, served to monitor on-going program status from the perspective of the DVEP staff. The follwoing sections describe these organizational evaluation activities and the key issues relating to effective project implementation which were identified. A final section reviews the scope of the empirical evaluation as it was defined by the program status.

DVEP Staff Activities

A preliminary meeting in late February, 1972 with one of the DVEP Coordinating Teachers and the three Vocational Aides assigned to her, proved to be informative to both the HSDL team and the DVEP staff. The HSDL team was able to obtain a clear and representative picture of the activities required for the DVEP project implementation at the fifth and sixth grade levels and an insight into the processes used in program delivery. For the DVEP staff, the meeting did much to clarify the nature and objectives of the evaluation and hopefully allayed some of their concern about being "evaluated".

The perceptions and descriptions of both the Coordinating Teacher and the Vocational Aides of their job duties and responsibilities were highly consistent with the job summaries presented in the original project proposal.

While there was variability in the number of classes for which the Vocational Aides were responsible at their respective schools, each Aide spent a minimum of one school day a week with each class. Beside the actual presentation of the career development information, the Aides participated in a variety of other activities during the school day. The Aides assisted the teacher in supervision of the class during other school activities; they provided tutorial assistance for students in either English and/or Math; and they spent time in the development of future career development presentations. The Aides also met with the Coordinating Teacher every Monday to share classroom experiences, knowledge and to develop future presentations for new job clusters. They discussed alternative methods of presenting the material including role playing exercises, lecture and visits to appropriate facilities, e.g. Hopkins Airport.

The Aides indicated that much of their initial classroom time in the Fall, 1971 was spent in observing the teachers' behavior in order to further develop their own teaching skills. As the school semester progressed, their experience and the assistance of their teachers resulted in an increase in their teaching competencies. They included skills such as generating class discussion about the topics presented; maintaining order during the presentations; and, in general, utilizing the class time more effectively.

This initial contact also yielded information about difficulties encountered in program delivery. The basic issue identified by the Aides was their dependency on both their particular teacher and the Social Studies curriculum. They felt that their effectiveness and maximum utilization could be, and was, in fact, enhanced by greater teacher interest. In those classes in which the teacher expressed interest and support of the concept of career development, the Aides were able to benefit greatly from the teacher's constructive criticism and active participation in the class presentations. Insofar as the career development program was tied to the Social Studies curriculum, the Aides indicated that this created a need to relate and justify any single presentation to the current Social Studies unit. Since the program was limited to one class session (40 minutes) a week, and the time to complete a given occupational cluster would progress at a slower rate than the Social Studies unit, this relationship became strained at times.

On-Site Observations and Teacher Perceptions

Following the discussion with the Coordinating Teacher and the three Aides, the initial overview of the existing processes and relationships needed to implement the DVEP program was completed with on-site observations of the Aides and interviews with their respective school teachers and principals.

In general, most of the teachers and principals indicated a favorable reaction to the concept of developmental vocational education for elementary school level children and were also favorably impressed with the delivery of the program. There were, however, two criticisms voiced by the teachers and principals.

The most prevalent criticism on the DVEP project, in terms of service delivery was the lack of skill development for the Aides in their role as class instructors. This was particularly true at the beginning of the program in the Fall, 1971. At that time, the Aides were almost completely inexperienced in preparing a lesson for presentation. It was readily apparent to the teachers that more in-service training would have benefitted the Aides. In fact, several of the Aides indicated that their initial enthusiasm for classroom instruction waned for a period of time at the beginning of the year. They became discouraged by their inexperience and had doubts about their effectiveness. This pattern was reversed as the school semester progressed, yet it most certainly detracted from effective program delivery.

Related to this criticism, both the teachers and principals indicated that they were initially unclear about the role of the Vocational Aide in the classroom beyond the Aides' actual presentation of career development information. The subsequent development of role definitions varied with the particular teacher-Vocational Aide relationship. In some cases , the Vocational Aide evolved into a teacher-assistant. That is, during the day the Aide would assist the teacher in other presentations and in running the classroom. This particular role definition most closely approximates the goal of the DVEP project to develop the Aides' career upgrading. Here the Aides become more familiar and more confident with the role of the teacher. This however, was not the case for all of the teachers. In many cases the Aides were under-utilized and left to themselves to occupy their time during the school day. In general, however, the teachers felt that the Aides gave them some much needed assistance in running the classroom.

The second major criticism by the teachers of the DVEP program involved the relationship between the career development material and the Social Studies units to which this material was to be related. It became readily apparent that the two sets of materials increasingly diverged from one another and would follow independent courses. The justification for relating the two sets of material to one another seemed somewhat artificial to the teachers. This observation reinforced the difficulties expressed by the Aides concerning the direct injection of the DVEP program into the Social Studies curriculum.

DVEP Staff Feedback

A feedback meeting was held with all the Coordinating Teachers and Vocational Aides to present the HSDL team's overview of the program and to obtain their reactions. The key processes and relationships required for effective program implementation were discussed.

While there were differences in the degree and type of in-service training provided to the Aides, most indicated that they would benefit from more substantive training rather than merely observing teachers for a short period of time.

The entire group noted differences in their utilization by the teachers. Most had developed enriched relationships with the teachers, in which the role of the Vocational Aide had evolved into something more. Some had not. These individuals were limited to their DVEP responsibilities, or even worse, misutilized by teachers so that they were performing clerical or "clean-up" duties.

Also mentioned as a difficulty in program delivery by Aides (as well as teachers) were administrative scheduling problems. These administrative problems existed within the DVEP project, the individual schools and between both. A frequent problem for example involved scheduling and coordinating field trips.

The overall consensus of the Aides was that the DVEP project had, within the relatively short implementation period from October, 1971 to April, 1972 significantly impacted on the target population.

Organizational Overview - October, 1972 - June, 1973

The commitment to observation of the organizational processes required for program delivery continued through the second academic year of the DVEP evaluation. However, the HSDL team's activities were less structured and less formal than the efforts in the previous academic year. A number of factors contributed to this shift in the team's approach. First, the previous evaluation efforts resulted in acceptance of the team by the DVEP staff. Thus it was possible to elicit staff perceptions, especially those of the Coordinating Teachers, through more casual contact. Second, initial staff comments suggested that the delivery process had developed to the extent that staff roles and program procedures were stabilized. Finally, the primary emphasis of the evaluation effort in the second year was directed toward assessing the empirical outcome objectives for the project activities at the upper elementary school level.

A modification which did occur in the program delivery process should be noted, however. This involved a fuller utilization of the Coordinating Teachers directly in the participating schools. Under this revised process, the Coordinating Teachers conducted three types of field visits:

(1) Visits to individual Vocational Aides to improve classroom instruction techniques;

(2) Visits, of a supportive nature, to schools to conduct workshops and attend faculty meetings and other group sessions;

(3) Visits, of a noninstructional nature, to schools to perform administrative activities, deliver instructional materials, etc.

Clearly, this increase in the Coordinating Teacher's activities responded to the difficulties encountered in program delivery during the previous year. By directly engaging in classroom instruction, the Coordinating Teachers improved the skill development of the Aides. This would both reduce the Aide's dependency on individual classroom teachers for learning experiences and clarify the Aide's classroom roles. That is, there would be less likelihood of misutilization by the classroom teachers in the presence of the Coordinating Teacher. The supportive service activities would also result in greater understanding of the classroom role of the Vocational Aides. Even more important such activities would more effectively communicate the goals and needs of the DVEP project. Finally, any administrative difficulties in program delivery, e.g. scheduling field trips would be more efficiently resolved through direct contact with the participating schools.

This organizational overview would not be complete without indicating that as early as October, 1972, the DVEP staff was aware that the project would not receive Federal re-funding for the next academic year. While the possibility of alternative funding sources existed and in fact were explored, this knowledge resulted in a significant loss of morale among the DVEP staff. Many Aides and several of the Coordinating Teachers began looking for new jobs within several months. Four Aides resigned from the staff in April and May, 1973 prior to the end of the academic year. While it is true that these and other resignations cannot be directly attributable to the "phase out" of the project, there was certainly a real loss in the overall effectiveness of program delivery. No program can achieve optimal effectiveness anticipating its own termination.

Specification of Empirical Evaluation Objectives

DVEP project implementation in May, 1972 required that the outcome objectives for evaluation be those appropriate for the upper elementary school level. While two outcomes for this level were originally proposed, the "hands-on" experiences necesssary for increased knowledge of the operation or basic tools and equipment (the second objective) had not been systematically implemented. Therefore, this objective was not considered for evaluation. Rather, the attitudes of the target population toward specific jobs and the world of work were identified as an outcome of the program to be evaluated. Therefore, the outcome objectives to be empirically evaluated were:

Objective 1: Successful program implementation will result in greater knowledge of a variety of occupations in a broad array of occupational areas.

Objective 2: Successful program implementation will result in more positive work attitudes and differences in job preferences.

In May, 1972, between three and five occupational clusters had been either partially or completely presented by the Vocational Aides. The two completed clusters common to all the Aides were Transportation and Communication. For the first outcome objective, the program evaluation for the first academic year focussed on the content of these clusters. Program evaluation for the second academic year beginning in September, 1972 assessed the impact and effectiveness of the DVEP project using the same empirical outcome objectives. However, the program content for the first objective was expanded to include the Health, Public Service, Aerospace, Apparel, Business and Office, Heavy Industry and Natural Resource occupational clusters.

INSTRUMENT DEVELOPMENT

Pilot Instrument Development - May 1972

In order to ensure the content validity of the first evaluation instrument a preliminary outline of its content was developed. Since this type of validity requires a rational approach to the adequate coverage of important content, the outline was reviewed by both the HSDL team and the DVEP staff. In addition to the content, the outline suggested the types of items to be employed, the approximate number of items, method of administration and scoring.

Several sources were utilized to develop the content for the instrument outline. The primary content source was the Quarterly Report (June 30, 1971) submitted by the DVEP Project Director. From this report, job classifications and descriptions specific to the common occupational clusters covered by the Aides up to May, 1972 were obtained. Further content information for these common clusters, specifically the Transportation and Communications clusters, was obtained from the pre-tests given by Vocational Aides prior to the class presentations of the material. The choice of item format was not only based on the content of the specific questions but also on the on-site visits by the HSDL team. It was felt that the level of presentation in class should dictate, in large measure, the level of presentation of the items.

This preliminary content outline evolved into two pilot instruments to evaluate program effectiveness. The content of the first instrument, the Job Information Questionnaire, reflected the knowledge of specific occupations transmitted through the program. Additional items in the instrument involved "general," or common knowledge information which was presented as part of the DVEP material. However, the knowledge required to complete these items was also available to students from sources other than the DVEP presentations. "Name of Cleveland's largest airport" is an example of these general information items which relate to the program content.

The second instrument resulting form the preliminary content outline was the Job Attitude Questionnaire which had two parts; an alternation ranking format to obtain information on job preferences and a semantic differential format to measure attitudes toward the world of work.

The use of an alternation ranking technique in this instrument involved a risk since it was not known whether fifth and sixth graders would be able to follow the unusual instructions. Nonetheless, it was decided that the obtained rankings could provide significant insights into the value which the students placed on specific jobs.

The alternation ranking procedure requires the student to examine a list of eighteen jobs and then think about how much he or she would like to work on each of the jobs. The individual is asked to identify the "Best" (most preferred) and then the "Worst" (least preferred) jobs on the list. An alternating choice procedure, "Next Best" and "Next Worst," is repeated until the list is exhausted. This procedure allows the individual to make choices of extreme preferences first. It is easier to distinguish between "Second Best" and "Second Worst" than it is to distinguish between "Second Best" and Third Best." While more administratively complex, the students should experience less difficulty in making their preferences.

The eighteen jobs used in this section were, for the most part, chosen from a list of ninety jobs used in study of occupational prestige in the United States (Hodge, Siegel and Rossi, 1966). The list was modified to eliminate any sex bias in the job titles. It was felt that these eighteen jobs reflected a complete range of high and low prestige jobs.

The semantic differential component of the Job Attitude Questionnaire is a more conventional approach for assessing the feelings of elementary school age children toward various concepts relating to the world of work. Those concepts included in the questionnaire were: GETTING A JOB, PLAY, CAREER EDUCATION, UNEMPLOYMENT, MAIL CARRIER, NEWSPAPER REPORTER, TELEPHONE OPERATOR and TELEPHONE INSTALLER. The latter four concepts are specific job titles with which both the experimental and control groups should be familiar. Each concept was then rated on nine scales anchored by bipolar adjectives. The nine adjective pairs used in the pilot instrument were taken from a semantic differential employed by the Cleveland Public Schools, Division of Research and Development.

Previous research (Osgood, 1962) has shown that three major factors are invariably defined by different semantic differential scales: evaluation, potency and activity. These factors are constructs which describe an underlying similarity among several scales. However, the factors do not always have the same content (the defining adjective scales) since the meaning of the semantic differential scales often depends on the concept being rated. Therefore, the underlying factor structure of a particular set of scales for a particular concept should be identified, rather than depending on previously defined factors for those scales.

Once the specific factors are defined, the scores on the component scales (in this case, obtained on a 5 pt. rating scale) are summed. These summed scores represent the measure of the individuals attitude toward the concept. From these group comparisons can also be made.

Pilot Instrument Field Testing

Both instruments, the Job Information Questionnaire, and the Job Attitude Questionnaire were field tested at Daniel E. Morgan Elementary School in May 1972. Two sixth grade (N=58) and one fifth grade (N=54) classes were used for the field testing sample. There were thirty-nine (N=39) males in the sample and fifty-three (N=53) females in the sample. The questionnaires were administrated over a two day period in order to determine the maximum possible amount of time needed for the completion of the questionnaires.

Oral instructions were given for each questionnaire. The following points were included in the oral instructions for the Job Information Questionnaire:

(1) This questionnaire will be used to compare fifth and sixth graders in the city of Cleveland with regard to their knowledge about certain jobs.

(2) This is not a test, but should be taken like a test. Therefore, please do not look at your neighbor's paper and try to do the work by yourself. If you do not know the answer, please guess. Try not to leave any answers blank. Do not worry about spelling when you answer fill-in questions.

(3) If you do not understand something as I am reading the questions, please raise your hand and I will try to answer your question.

(4) When I read a question and you know the answer, do not yell the answer out loud. Write or underline the right answer.

(5) Your answers will be confidential and will not be used for your grades in this class. We are not interested in your individual score. Remem-

ber we want to compare fifth and sixth graders throughout the City of Cleveland.

The questionnaire was then distributed. The test administrator, a member of the HSDL team, then read each item in the questionnaire to the class. The next item was read when all the students indicated they had completed the previous item.

The oral instructions for the Job Attitude Questionnaire were quite similar. However, they were modified to indicate that this was a measure of the students feelings toward certain jobs rather than their knowledge about certain jobs. For the alternation ranking procedure, the students also were told that all the jobs could be performed by either men or women, i.e., were no "male jobs" or "female jobs."

Again, in administering the questionnaire, all efforts were made to allow each student to complete the entire questionnaire. For both the alternation ranking and semantic differential sections, the test administrator demonstrated the proper procedure for completing the items with step-by-step instructions.

Data Analysis for Job Information Questionnaire

The Job Information Questionnaire data was analyzed with the objective of obtaining a reliable measure of both general and specific knowledge relating to particular occupational clusters. Since the content and purpose of this pilot instrument defined it as an achievement test, two types of item analyses were performed: item difficulty and item-total correlation. (See Appendix B for an explanation of the item analyses used)

The item difficulty and item-total correlation data were examined for each item in the pilot instrument. Those items with the highest item-total correlations and with item difficulties between 40% and 60% were retained. Additional items with acceptable item-total correlations but with "p" values somewhat below 40%, e.g., 30% were also retained. The rationale for including these additional items was that the field test subjects, like the control subjects in the actual comparison study, should be less likely to pass the test items. Thay had not been exposed to the DVEP material and the items should be expected to be more difficult for them.

The score distributions for some of the "fill-in" items indicated an artifically high weighting of these items in the total scores. A revised scoring key for these items was also developed.

The revised achievement measure (see Appendix C, pages 1-3 of Job Information Questionnaire) consisted of thirty-eight (38) items with a maximum score value of fifty (50). Table 1 shows the obtained item difficulties and item-total correlations for each item after the revised instrument was administered to the experimental students (those in the DVEP project) and a control students (comparable students not in the project). With respect to the three conditions which maximize internal-consistency reliability, the following can be observed:

(1) The obtained item-total correlations, in place of item intercorrelations, were all positive and with two exceptions (item 9p and 9q) were above .20 for the total group. In fact, twenty-six (26) of the thirty-eight (38) correlation coefficients (index of the relationship between passing an item and obtaining a high score) were above .30. Given the total number of items, these relationships between item

Comparison of Item Difficulties (p) and Item-Total Correlations (r) for Questionnaire Items

Questionnaire Items	Experimental Group (N=492*)		Control Group (N=314)		Total Group (N=806*)	
	Item p	Cor. Coef. (r)	Item p	Cor. Coef. (r)	Item p	Cor. Coef. (r)
1 (Fa. Occ.)	39%	.26	32%	.30	37%	.29
2 (Mo. Occ.)	68%	.21	52%	.34	62%	.32
3 (# Newspapers)	56%	.31	37%	.40	48%	.37
4 (# T.V. Stat.)	87%	.28	84%	.19	86%	.24
5 (Airport)	60%	.49	39%	.46	52%	.51
6 (# Airlines)	42%	.60	9%	.50	29%	.62
7 (Soc. Sec. Card)	62%	.45	21%	.16	46%	.44
8a	37%	.22	21%	.15	31%	.24
8b	64%	.40	43%	.16	56%	.36
8c (Job Order)	56%	.47	36%	.19	48%	.41
8d	55%	.42	36%	.10	48%	.35
8e	35%	.22	17%	.09	28%	.23
9a (S. D. Mess.)	80%	.46	81%	.35	81%	.39
9b (Copy Ed.)	82%	.46	78%	.32	81%	.40
9c (Installer)	64%	.47	48%	.33	58%	.44
9d (Lineman)	58%	.36	51%	.17	56%	.30
9e (Traf. Mang.)	44%	.23	34%	.17	40%	.23
9f (News. Dir.)	46%	.35	33%	.19	41%	.32
9g (Serv. Rep.)	33%	.27	24%	.13	29%	.24

* For Items 1 and 2, N=438 in Experimental Group and N=752 in Total Group.

Comparison of Item Difficulties (p) and Item-Total Correlations (r) for Questionnaire Items

Questionnaire Items	Experimental Group (N=492*)		Control Group (N=314)		Total Group (N=806*)	
	Item p	Cor. Coef. (r)	Item p	Cor. Coef. (r)	Item p	Cor. Coef. (r)
9h (Par. Post Carr.)	77%	.43	74%	.41	76%	.40
9i (Engraver)	51%	.37	43%	.38	48%	.37
9j (Pressman)	82%	.48	84%	.29	83%	.39
9k (Make-up Artist)	54%	.31	55%	.27	55%	.27
9l (Chief Eng.)	44%	.32	29%	.09	38%	.28
9m (Broad. Tech.)	77%	.49	71%	.37	74%	.44
9n (Sales Rep)	28%	.28	19%	.02	25%	.22
9o (Dir. Clerk)	37%	.41	28%	.15	34%	.33
9p (Dist. Clerk)	28%	.07	35%	.13	31%	.06
9q (For. Corr.)	25%	.05	28%	.20	26%	.08
9r (Wind. Cler.)	61%	.37	50%	.28	57%	.35
10	70%	.34	46%	.11	60%	.31
11 (Airline Jobs)	89%	.39	91%	.31	90%	.33
12	79%	.23	72%	.17	76%	.22
13	67%	.42	55%	.30	62%	.3[illegible]
14 (Hos. Jobs)	-	.50	-	.36	-	.46
15a	53%	.36	31%	.23	45%	.36
15b ("Odd" Job)	55%	.37	41%	.29	50%	.37
15c	56%	.42	13%	.25	51%	.28

scores and total test scores can be considered statistically significant.

(2) The average item difficulties for the experimental, control and total groups were 56.9%, 44.2% and 52.4%, respectively. These values, particularly the average item difficulty for the total group, closely approximate the requirement of 50% average item difficulty.

(3) The condition of equal item difficulty for all items was only partially fulfilled. Seventeen (17) of the thirty-seven (37) items had "p" values between 40% and 60% for the total group. Here, the primary concern was to minimize excessively difficult items. While some easy items are desirable from the point of view of reducing test anxiety, too many such items reduce the score distribution. There were only five (5) whose difficulty level was above 80%.

Beyond these observations, the key index to assess the results of the item analyses was the actual internal-consistency reliability for the revised instrument. By obtaining split-half scores for each individual (half the items were randomly selected, their item scores summed and then compared to the summed item scores for the other items) estimates of reliability can be obtained. However, the split-half approach only represents an estimate of the reliability for half of the test. While the full-length test is not twice as reliable as the half test, its reliability is greater and can be obtained using the Spearman-Brown correction. The reliabilities of the total test using the Spearman-Brown correction of the split half reliability were .86, .77, and .84, for the experimental (DEVP), control and total groups, respectively. These corrected split half reliabilities equal or exceed the acceptable level of reliability in test construction (Nunnally, 1967).

Data Analysis for Job Attitude Questionnaire (Alternation Ranking)

The first section of the Job Attitude Questionnaire consisted of the alternation ranking of eighteen jobs to obtain information on the relative prestige or value of these jobs. As previously discussed, this procedure represents a departure from conventional attitudinal measures. Not only the data from the pilot instrument, but the actual process of administering this technique were examined to determine whether the alternation ranking should be included in the revised instrument. No specific objectives were identified in assessing the data; the analysis simply was exploratory.

The field testing of this section required a more structured test administration by the DVEP team. Step-by-step instructions were provided for the first six rankings; by then, almost all the field test subjects understood the ranking procedure and the nature of the information desired, i.e., which jobs they preferred more. The percentage of missing data for this section was comparable to the Job Information Questionnaire and the semantic differential section. Thus, the alternation ranking procedure was considered to be administratively acceptable.

In order to examine the field test data, the median rank for each of the eighteen jobs was determined. Consecutive values from 1 to 18 were assigned to the rankings of "Best Job" to "Worst Job." Then, a frequency distribution of these values for each job was obtained. The median rank was then defined as the value above which were exactly half the field testing rankings and below which were the other half. For example, the median rank for the job of Doctor was 6.33. This indicates that half the students rank this job either 1,2,3,4,5 or 6 while the other half ranked the job between 6 and 18.

Table 2 presents the median rank data for the total sample and for males and females. The numbers in the parentheses are the ranks of the median rank data, e.g. for Teacher the median rank for the total group was 4.60 and this was the highest value obtained for all the jobs. As is clearly evident, certain jobs were preferred by males and others by females. This obtained sex bias in the preferences of certain jobs was obtained in spite of the instructions which specified that all the jobs were equally available to males or females.

Since no administrative difficulties were encountered and there was potential for meaningful data, the alternation ranking section was included in the revised instrument (See Appendix C, page 3 of Job Information Questionnaire). However the obtained sex bias suggested that differences in the median ranks for experimental (DVEP) boys as compared to control boys and experimental girls as compared to control girls should be examined. The underlying hypotheses would be that the DVEP project would effect the perceived preferability of certain jobs.

Data Analysis for Job Attitude Questionnaire (Semantic Differential)

The second section of the Job Attitude Questionnaire consisted of a semantic differential format (a group of nine bipolar adjective rating scales) for nine concepts relating to the world of work. Again, this approach represented a standard method of obtaining measures of attitudes and sentiments. The primary objective of this data analysis was to identify a common factor(s) among

Table 2

Median Rank Data for Males, Females and Total Field Testing Sample

Job	Male		Female		Total	
Doctor	4.30	(4)	9.10	(10)	6.33	(4)
Actor/Actress	5.90	(7)	4.20	(3.5)	4.80	(2)
Nurse	13.20	(16)	4.20	(3.5)	7.00	(6)
Car Mechanic	2.90	(1)	14.10	(17)	10.50	(12.5)
Teacher	7.85	(10)	3.30	(2)	4.60	(1)
Policeman	3.90	(2.5)	12.50	(14.5)	11.60	(16)
Executive Secretary	10.40	(11)	4.90	(5)	6.50	(5)
Waiter/Waitress	11.20	(12)	8.33	(9)	9.90	(10)
Model	11.65	(13)	1.66	(1)	6.00	(3)
Lawyer	3.90	(2.5)	11.00	(12)	8.66	(9)
Reporter	7.00	(8)	12.20	(13)	10.80	(14.5)
Beautician	12.40	(14.5)	5.10	(6)	7.90	(7)
Garbage Collector	17.10	(18)	17.85	(18)	17.66	(18)
Cook	13.85	(17)	6.70	(7)	8.40	(8)
Disk Jockey	7.50	(9)	10.60	(11)	10.20	(11)
Stewardess	12.50	(14.5)	7.60	(8)	10.90	(14.5)
Electrician	5.40	(5.5)	12.50	(14.5)	10.50	(12.5)
Airplane Pilot	5.50	(5.5)	13.90	(16)	12.60	(17)

the nine scales within each of the world of work concepts. With the identification of the common factor(s), it would be possible to meaningfully sum the appropriate scale scores to measure the meaning each concept evokes for an individual.

In order to identify the common factor(s) within each concept, a factor analysis was performed. For each adjective scale, a numerical score was assigned to the subject's rating. Since 5-point scales were employed; a value of 5 was assigned to the positive pole of each scale and a value of 1 to the negative pole. For example, on the Good-Bad scale a rating next to Good received a score value of 5 and a rating next to Bad received a score value of 1. The meanings of each step on the scale were carefully defined and illustrated for the field testing sample. Each scale score was then correlated with each of the other eight scale scores for all the concepts. Positive correlations would indicate high ratings on one scale, e.g. scores of 4 and 5, were associated with high ratings on the other scales.

Based on the correlations among the semantic differential scales, a "principle components method" factor analysis was performed for each concept. This factor analytic method is simply a mathematical procedure which takes the correlations among the scales and attempts to account for the various relationships in terms of fewer underlying hypothetical variables. These hypothetical variables are called factors. In other words, factors are redefinitions of the interrelationships among the scales in terms of fewer variables. The interpretation of a given factor depends on which scales relate to it most strongly, i.e. scales correlating with factors.

For all the nine concepts, the respective factor analyses resulted in one factor, Factor I, which clearly accounted for a majority of the correlations among the scales. In fact, with one exception, all the adjective scales related to Factor I more than any other factor obtained. Only one scale consistently related more strongly with other underlying factors. Since eight of the semantic differential scales define the content of Factor I, it was considered to be an "evaluation" factor. In the revised instrument (see Appendix C, pages 4-6), the semantic differential section employed these eight scales defining Factor I. The ninth scale was not included since it would yield only one scale score for the comparison between the experimental and control schools and this would be insufficient. The sum of the eight remainint scales provided a measure of attitudes with regard to each of the work concepts.

In the data analysis for the semantic differential, an additional series of factor analyses were obtained to compare the work concepts on additional series of factor analyses were obtained to compare the work concepts on individual adjective scales. That is, the ratings on one scale were correlated across all nine concepts. This was done for each adjective scale, separately. The factor analyses of the scales yielded several factors that were consistently defined by the same concepts. Factor I was defined by the concepts REPORTER, TELEPHONE OPERATOR, MAIL CARRIER and TELEPHONE INSTALLER. A second factor was consistently defined by the concept of PLAY. The remaining concepts, GETTING A JOB, CAREER, EDUCATION and UNEMPLOYMENT, served to define two other factors. However, the combination of these concepts was not uniform in all the factor analyses of the scales.

These data indicated that the concepts relating to specific jobs elicit attitudes, as measured by scale scores, different than the attitudes toward the other concepts. Since the concepts were highly related, the concept of TELEPHONE OPERATOR was not included in the revised instrument due to questionnaire design considerations, particularly test length. It was felt that there would be a minimal loss of attitudinal information.

Instrument Development - November, 1973

The program evaluation for the academic year beginning in September, 1972 used the same empirical outcome objectives as the first evaluation. However, the program content to be evaluated under the knowledge achievement objective was expanded for the second year evaluation. It was therefore necessary to develop new items for the content portion of the Job Information Questionnaire. The instrument development procedure was again performed to obtain a meaningful and reliable achievement measure for the expanded content.

A preliminary content outline was developed and reviewed by the HSDL team and DVEP staff. The sources utliized to develop this content were the same as those used previously: the Quarterly Report (June, 1970) and pre-tests administered by the Aides prior to class presentations. In addition to concent on the Transportation and Communication clusters, information concerning the Health, Public Service, Aerospace, Manufacturing (Apparel), Business and Office, Heavy Industry and Natural Resource clusters were represented in the content of the questionnaire.

The expanded content portion of the Job Information was field tested at Alfred A. Benesch Elementary School in December, 1972. Two fifth grade (N = 42) and two sixth grade (N = 56) classes comprised the field testing sample. There were forty-four (N = 44) males and thirty-four (N = 34) females in the sample. The oral instructions employed in this field testing were the same as those given in the first field test administration (see p20)

Job Information Questionnaire Data Analysis - December, 1972

The data obtained from the field testing was item analysed using both item difficulty and item - total correlation statistics. This procedure resulted in a forty-one (41) item achievement measure which had a maximum score value of 49 (see Appendix D, pages 1 - 4 of Job Information Questionnaire II) Table 3 shows the obtained item difficulties and item - total correlations for each item after the evaluation instrument had been administered in February, 1973. This was the second administration of an evaluation instrument to assess the empirical program objectives. The following conditions regarding internal - consistency reliability were observed:

(1) The obtained item-total correlations were all positive. Thiry-four (34) of the correlation co-efficients were above .20 for the total group. Twenty-six (26) of these in fact, were above .30. All the relationships between item score and total test score above .20 can be considered statistically significant.

(2) The average item difficulties for the experimental control and total groups were 49.2%, 45.8% and 48.2% respectively. These average item

Comparison of Item Difficulties (ρ) and Item-Total Correlations (r) for Questionnaire Items

(Second Administration)

Questionnaire Items	Experimental Group (N=744)		Control Group (N=292)		Total Group (N=1036)	
	Item	Cor. Coef.( )	Item	Cor. Coef.( )	Item	Cor. Coef.( )
1 (# Newspapers)	57%	.40	34%	.23	50%	.38
2 (Airport)	59%	.49	44%	.48	55%	.49
3 (# Airlines)	30%	.64	5%	.48	23%	.61
4 (Soc. Sec. Card)	51%	.49	18%	.20	41%	.44
5 (Apparel Industry Correct Job Order)	0 right 16%	.47	17%	.34	17%	.46
	1 right 15%		26%		18%	
	2 right 13%		17%		14%	
	3 right 19%		21%		20%	
	5 right 36%		19%		31%	
6a (Fireman)	54%	.20	42%	.04	51%	.18
6b (Policeman)	69%	.39	68%	.18	69%	.34
6c (Policeman)	30%	.32	22%	.14	28%	.29
6d (Fireman)	67%	.18	55%	-.02	64%	.14
6e (Policeman)	81%	.31	85%	.17	83%	.27
6f (Fireman)	45%	.23	44%	.06	45%	.19
7a (Hosp. Jobs)	45%	.41	37%	.07	42%	.34
7b (Hosp. Jobs)	34%	.42	33%	.11	34%	.35
7c (Hosp. Jobs)	43%	.49	40%	.40	42%	.47

Comparison of Item Difficulties (ρ) and Item-Total Correlations (r) for Questionnaire Items (continued)

(Second Administration)

Questionnaire Items	Experimental Group (N=744)		Control Group (N=292)		Total Group (N=1036)	
	Item	Cor. Coef.( )	Item	Cor. Coef.( )	Item	Cor. Coef.( )
7d (Hosp. Jobs)	44%	.46	44%	.34	44%	.43
7e (Hosp. Jobs)	46%	.49	47%	.28	46%	.24
8a ("Odd" Job)	43%	.25	11%	.04	34%	.43
8b ("Odd" Job)	55%	.45	41%	.31	51%	.40
8c ("Odd" Job)	49%	.40	36%	.36	45%	.40
9A.a (Installer)	74%	.43	79%	.38	75%	.45
9A.b (Broad. Tech.)	76%	.48	85%	.43	79%	.44
9A.c (Wind. Clerk)	65%	.48	58%	.30	63%	.45
9A.d (Photo Engraver)	64%	.48	66%	.38	64%	.43
9A.e (Make-up Artist)	63%	.48	68%	.32	64%	.37
9A.f (Direct. Clerk)	41%	.41	39%	.23	40%	.32
9B.a (Hi and Lo Lineman)	53%	.36	55%	.21	54%	.38
9B.b (Dog Warden)	76%	.45	88%	.20	79%	.40
9B.c (Sew. Plt. Att.)	61%	.47	74%	.27	65%	.19
9B.d (Chemist)	33%	.17	25%	.22	30%	.16
9B.e (Geologist)	28%	.16	28%	.18	28%	.16
9C.a (Nuc. Eng.)	31%	.33	46%	.32	35%	.29
9C.b (Barker Mach. Op.)	37%	.22	39%	.08	38%	.19

TABLE 3 (continued)

Comparison of Item Difficulties (ρ) and Item-Total Correlations (r) for Questionnaire Items (continued)

(Second Administration)

	Experimental Group (N=744)		Control Group (N=292)		Total Group (N=1036)	
Questionnaire Items	Item	Cor. Coef.( )	Item	Cor. Coef.( )	Item	Cor. Coef.( )
9C.c (Blast Furn. Op)	37%	.27	46%	.35	40%	.27
9C.d (Supercalender Op.)	43%	.30	51%	.12	46%	.25
9C.e (Eng. Mech.)	31%	.21	45%	.32	35%	.21
9C.f (Pulpmaker Worker)	40%	.22	49%	.23	43%	.21
10 (Teller)	60%	.35	56%	.17	59%	.31
11 (Receptionist)	25%	.34	13%	.12	21%	.31
12 (Bookkeeper)	36%	.44	22%	.33	32%	.43
13 (Ship. and Rec. Clerk)	57%	.41	66%	.27	59%	.36
14 (Truck Driver)	36%	.39	27%	.07	33%	.33

difficulty values closely approximate the desired 50% average item difficulty.

(3) Again, the condition of equal item difficulty was only partially fulfilled. Eighteen (18) of forty (40) items had "p" values between 40% and 60% for the total group. Only one item could be considered too easy (6 e) and no items could be considered excessively difficult. ("p" values below 20%).

The Spearman - Brown correction of the split-half reliability yielded internal consistency reliability co-efficients .88, .75 and .86 for the experimental (DVEP) control and total groups, respectively. Clearly, the expanded content portion of the Job Information Questionnaire II, was statistically comparable to the version employed in the first empirical evaluation.

While not specifically instrument development, the Job Information Questionnaire , was modified in one additional respect. Based on the data from the empirical evaluation performed in June, 1972, four of the semantic differential concepts were not included in the Job Information Questionnaire II, used for the second and third test administrations. The concepts of Career, Play, Unemployment and Education did not yield significant score differences between the experimental (DVEP) and control groups in the June, 1972 administration. To pursue the lack of attitudinal differences in the second and third evaluations did not seem appropriate.

Summary

The assessment of the DVEP project involved both achievement and attitudinal evaluation objectives. Instrument development was, therefore, directed toward obtaining meaningful and reliable measures in both these areas. The primary emphasis of the data analysis for the content questions was on internal-consistency reliability. Using two types of item analysis, item difficulty and item-total score correlation, a two achievement measures were developed. The second content measure was required to meet the increased level of project implementation. The internal-consistency reliability for both measures was approximately .85 which is well above the required level of acceptability.

The data analyses for the attitudinal portions of the evaluation instrument also, examined the test administration constraints of the measurement techniques. Although a departure from typical attitude measures, the alternation ranking procedure yielded differential information about job preferences. The more conventional measure, the semantic differential, was slightly revised based on factor analysis data. The use of a single summed score for the semantic differential scales also resulted from the factor analyses.

The first evaluation instrument, the Job Information Questionaire, included the content, ranking and semantic differential measure. A second instrument, the Job Information Questionnaire II, included a revised content, a ranking and a shortened semantic differential measure.

EMPIRICAL EVALUATION

The impact of the DVEP project as defined by the evaluation objectives was assessed by comparing the data obtained from achievement and attitudinal measures for students who has participated in the program (experimental group) with the same data for students who had not (control group). The comparisons were performed in June,1972, using the Job Information Questionnaire,and in February, 1973 and June, 1973 using a revised form of this questionnaire.

Sample

The Division of Research and Development, Cleveland Public Schools identified three (3) elementary schools whose student populations were comparable to those of the experimental (DVEP) schools in terms of socio-economic background and learning potential. Differences between the experimental and control schools with respect to teacher skills, classroom conditions, etc. also were not oonsidered to be significant. These schools thus provided a "matched" group of fifth and sixth grade students for testing. The specific sample sizes, both experimental and control, for the three administrations of the evaluation instruments were:

(1) First Administration (June, 1972) - One fifth and one sixth grade class from each of the ten elementary schools in the DVEP program. The total number of students in the experimental group was 492. There were 259 fifth graders and 233 sixth graders.

The test sample in the control schools included all the fifth and sixth grade students present in class on the days the questionnaire was administered (N=314). There were 140 fifth and 174 sixth graders.

(2) Second Administration - February, 1973 - All the available fifth and sixth grade students participating in the program in the experimental schools were

tested. The total number of students in the experimental group was 740. There were 338 fifth grade and 402 sixth grade students tested.

The control school sample also represented all the fifth and sixth grade students available for testing at the time the questionnaire was administered. The total sample was 292 students; there were 140 fifth graders and 152 sixth graders.

(3) Third Administration June, 1973 - Due to staff turnover among the Vocational Aides and program discontinuation the students in only six (6) DVEP schools were tested (N=236). There were 141 fifth graders and 95 sixth graders in the sample.

Only one control school was tested for this administration. All the fifth graders (N=48) and sixth graders (N=52) available were tested.The total sample was 102. It was felt that the small test score variability obtained among the control schools in the previous administrations assured the representativeness of the smaller sample in this administration.

Questionnaire Administration Procedure

Since it was not logistically feasible for one or two administrators to test all students, the DVEP Vocational Aides administered the questionnaires in their respective schools. The HSDL team administered the questionnaires in the control schools. The Vocational Aides were given a training session on both versions of the evaluation instrument to standardize the test procedures. While the issue of bias can be raised with regard to the use of the Aides, it should be noted that they had previously tested their students on DVEP material. Since the program was being evaluated, the obtained scores should have reflected more typical classroom conditions. Therefore, the use of the Aides was considered appropriate and acceptable.

The oral instructions for both questionnaires were quiet similar to those given for the pilot instruments. However, the questionnaires were introduced as both a measure of job information and a measure of their feelings about certain jobs. Again, each item was read to the students and time allowed for completion by all the students. For both the alternation ranking and semantic differential sections, the test administrators illustrated the proper procedure for completing the items and also provided step-by-step instructions. The questionnaire administrations typically required one class periods. However, extra time was allocated and if neccessary, used to insure that the students would be able to fully complete the questionnaire.

A problem was encountered in the first administration when one DVEP school principal felt that the first two questionnaire items (Father's and Mother's Occupation) were not appropriate as a measure of job knowledge and requested these items not be completed. The students in this school were not scored on these items, although the mean score for this group was weighted so they would not be compared unfairly. These items were not included in the revised evaluation instrument. All the teachers and school principals, in both experimental and control schools, were extermely cooperative and facilitated the three administrations of the questionnaires.

Results (Objective I)

A multiple-factor analysis of variance model was used to determine whether experimental (DVEP) students had more general and specific knowledge relating to particular occupational clusters than did control students. Total score on the content portions of the evaluation instruments represented the measure of general and specific knowledge. While the key variable for this evaluation was participation in the DVEP project, other factors could effect the test data. Of particular concern, were the effects of grade level (5th vs. 6th) and of sex (male vs. female). That is, would fifth graders perform differently than sixth graders?; would boys do better than girls?; would there be score differences between fifth graders in the experimental schools and those in the control schools?; etc.

Thus, three variables were incorporated onto the statistical model: sex, grade level and, most important, program participation. For each of these variables or factors, there were two conditions: male vs. female, fifth vs. sixth grade and experimental vs. control school. The appropriate analysis of variance model was a 2 x 2 x 2 design (read as "two by two by two") which incorporates three factors each having two levels or conditions. In this design, the factors and their respective conditions define the different subgroups which were tested, e.g.girl. 5th graders.

Tables 4, 5 and 6 present the mean or average scores obtained by students in each of the different subgroups examined for each test administration.

Given these mean score values, the analysis of variance model tested whether the score differences for each factor and combination of factors were sufficiently large to indicate significant effects due to these variables. For the analysis of variance of the first administration data, the computational program employed required proportional or equal cell frequencies. It was therefore necessary to randomly sample an equal number test subjects in each of the different subgroups examined. The analyses performed for the remaining administrations substituted a comparable computional program which did not require the random sampling procedure. Tables 7, 8 and 9 present the summary data for these analyses. In the tables, the F-ratio represents the statistic from which probability estimates are obtained. The larger the value of F, the less likely that the distribution of score differences occurred by chance. F-ratio's were obtained for each of the three main factors, Sex, Grade and School, and for the various combinations of the factors.

For the first administration, three of the obtained F-ratio's were sufficiently large to indicate that they were not due to chance. Using levels of significance of .01 and .05 (one chance in a hundred and five chances in a hundred), the factors of GRADE, SCHOOL and a combination of both can be considered to have meaningfully affected the obtained scores. Examining Table 4, it can be seen that the students in the

TABLE 4

Mean Achievement Scores on Job Information Questionnaire
(First Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	28.15	30.66	21.32	24.66
Female	31.13	30.18	20.03	24.99

Mean scores are based on randomly selected samples from each sub-group population. In each sample N = 68.

TABLE 5

Mean Achievement Scores on Job Information Questionnaire II
(Second Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	23.92 (N = 165)	26.22 (N = 194)	22.83 (N = 57)	23.80 (N = 71)
Female	24.94 (N = 173)	27.15 (N = 208)	20.71 (N = 82)	24.30 (N = 81)

TABLE 6

Mean Achievement Scores on Job Information Questionnaire
(Third Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	24.73 (N = 71)	30.00 (N = 46)	20.45 (N = 20)	25.96 (N = 26)
Female	23.31 (N = 68)	31.53 (N = 47)	22.04 (N = 28)	25.69 (N = 26)

Table 7

Analysis of Variance of Job Information Questionnaire I Scores for Sex, Grade and School Variables

(First Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	19.88	19.88	.32
Grade (B)	1	825.18	825.18	13.40*
School (C)	1	7206.62	7206.62	117.00*
Sex x Grade (AxB)	1	29.19	29.19	.47
Sex x School (AxC)	1	102.38	102.38	1.66
Grade x School (BxC)	1	385.60	385.60	6.26**
Interaction (AxBxC)	1	220.06	220.06	3.57
Within Error	536	33,016.48	61.60	
Total	543	41,805.38		

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* F-Ratio is significant beyond the .001 level.

** F-Ratio is significant beyond the .01 level.

TABLE 8

Analysis of Variance of Job Information Questionnaire II Scores
for Sex, Grade and School Variables
(Second Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.01	.01	.02
Grade (B)	1	10.31	10.31	13.26 *
School (C)	1	14.07	14.07	18.09 *
Sex x Grade (AxB)	1	.80	.80	1.02
Sex x School (AxC)	1	1.60	1.60	2.06
Grade x School (BxC)	1	.00	.00	.00
Interaction (AxBxC)	1	.91	.91	1.17
Within Error	1023	795.30	.78	
Total	1030	823.00		

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* F-Ratio is significant beyond the .01 level.

TABLE 9

Analysis of Variance of Job Information Questionnaire II Scores for Sex, Grade and School Variables (Third Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.25	.25	.12
Grade (B)	1	64.18	64.18	30.23 *
School (C)	1	29.77	29.77	14.02 *
Sex x Grade (AxB)	1	.15	.15	.07
Sex x School (AxC)	1	.18	.18	.09
Grade x School (BxC)	1	2.34	2.34	1.10
Interaction (AxBxC)	1	2.89	2.89	1.36
Within Error	324	687.96	2.12	
Total	331	787.73		

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* F-Ratio is significant beyond the .01 level.

sixth grade classes obtained significantly higher scores than fifth grade students, regardless of sex or program participation. Further, and most important, those students in experimental (DVEP) schools obtained significantly higher scores than students in control schools, regardless of sex or grade level. Finally, when both factors were combined e.g. fifth grade-control, there was an additional affect on the obtained scores. Specifically, the difference between the mean scores of fifth and sixth grade students in control schools was greater than the score difference between grade levels in experimental (DVEP) schools. This suggests that the experimental students equally retained the information presented in the classroom regardless of grade level. This was not true of the control students where effects of grade level were more pronounced.

Analyses of the data from both the second and third test administrations yielded significant F-ratio's for the factors of GRADE and SCHOOL. The sixth grade students continued to have significantly greater knowledge of DVEP information than fifth grade students. More relevant to the evaluation objectives was the continued significant difference between the obtained scores of DVEP students and those of the control students. Thus, program participation resulted in significantly greater knowledge, both general and specific, of a broad array of occupational clusters.

This conclusion, however, does not uniformly apply to all the schools which participated in the DVEP project. Table 10 presents the mean scores obtained from the first administration of the Job Information Questionnaire for each of the experimental control schools. The mean scores for the three control schools were highly consistent. This indicated that the evaluation instrument was validly measuring knowledge about particular occupational clusters since students in these schools should be equally naive about this material. On the other hand, the mean scores for the experimental schools showed a high degree of variability. The range of these mean scores extended from a low of 20.48 to a high of 37.06. The magnitude of this difference cannot be accounted for by chance testing factors or slight differences in the number of fifth and sixth grade students in the school samples, i.e. sixth graders score higher than fifth graders.

Table 10

Mean Job Information Questionnaire Scores and Mean Pupil Learning Rates by School (PLR)
(First Administration)

Experimental		Mean PLR's	Mean		Standard Deviation
School 1	(N=47)	89.39	28.77	(6)	5.71
School 2	(N=46)	N.A.	34.87	(8)	6.57
School 3	(N=49)	93.60	22.12	(2)	7.41
School 4	(N=44)	88.22	20.48	(1)	8.20
School 5	(N=47)	90.00	35.83	(9)	4.47
School 6	(N=45)	102.06	24.69	(4)	8.82
School 7	(N=52)	92.51	23.92	(3)	7.17
School 8	(N=46)	93.12	25.50	(5)	6.76.
School 9	(N=61)	93.10	32.67	(7)	7.23
School 10	(N=55)	N.A.	37.06	(10)	8.24
Total	(N=492)		28.83		9.25
Control					
School 11	(N-85)	N.A.	23.72		7.35
School 12	(N=177)	N.A	22.71		6.82
School 13	(N-52)	N.A.	24.31		5.42
Total	(N=314)		23.25		6.79

N.A. - Not Available

Several alternative explanations were considered. The first, and most obvious, is that real differences in learning potential of the students in the various schools existed. While superficially convenient, such an explanation was not supported when the mean Pupil Learning Rate (PLR) for each school is examined (see Table 10). While differences certainly occur, they do not correspond to the differences obtained on the achievement measure. The second possible explanation involved the idea of differential impact in the delivery of the DVEP material. Within this idea such factors as the relative competence and enthusiasm of the Vocational Aides, time spent with students beyond classroom presentations and degree of cooperation with classroom teachers might affect the responsiveness of student to DVEP presentations.

Assuming such a "differential impact" explanation to be accurate, achievement score differences among the experimental schools would be maintained over a period of time. Table 11 indicates that the magnitude of mean score differences continued through the academic year beginning September, 1972. The range of mean scores obtained from the second test administration extended from a low of 18.51 to a high of 40.00. While the absolute levels of performance between the two administrations should not be compared due to differences in the measurement instruments, the relative performances among the schools can be examined. An examination of the ranks ("1" is lowest) of the schools for the first and second administration indicates a relatively stable ordering in the performance of the schools. The shift in the ranking of schools 3 and 10 account for most of the differences observed. The existence of an on-going difference in program delivery process among the schools gains credence with the stability of these inter-school performance differences. It should be noted that these differences occurred in spite of the increase field activity of the Coordinating Teachers.

Results (Objective 2)

The alternation ranking section of the evaluation instruments provided data to compare the attitudes of the experimental and control groups toward specific occupations. In particular, the data analysis sought to obtain information regarding differ-

Mean Job Information Questionnaire Scores for Experimental and Control Schools
(Second and Third Administration)

	Second Administration			Third Administration		
Experimental	Sample Size	Mean	Standard Deviation	Sample Size	Mean	Standard Deviation
School 1	147	24.04 (5)	6.36	---	---	---
School 2	69	33.96 (9)	8.62	---	---	---
School 3	30	22.97 (4)	9.42	---	---	---
School 4	101	18.51 (1)	7.60	23	18.09	6.90
School 5	51	40.00 (10)	6.82	40	32.50	9.44
School 6	45	21.91 (3)	7.08	24	23.25	7.97
School 7	77	18.77 (2)	8.05	---	---	---
School 8	76	26.40 (6)	8.78	44	25.39	10.54
School 9	88	29.38 (8)	7.32	57	26.63	7.99
School 10	56	26.79 (7)	8.03	48	29.31	8.34
Total	740	25.67	9.69	236	26.74	9.52
Control						
School 11	61	22.31	6.33	---	---	---
School 12	131	21.51	6.54	102	23.61	7.40
School 13	100	24.94	7.35	---	---	---
Total	292	22.85	6.94	102	23.61	7.40

ences in the students preferences for certain jobs. However, the pilot instrument data indicated a direct experimental-control group comparison would be heavily biased by the identification of certain jobs as "male" jobs and/or "female" jobs. In order to control for this bias, comparisons were made using male and female subgroups. Thus, the preferences of experimental-males were compared to control-males and likewise, experimental-females were compared to control-females.

No effort was made to control for grade level since the pilot instrument data resulted in no real differences in the rankings of fifth and sixth graders.

For each of the jobs which were ranked, comparisons were made between the distributions of ranks given that job by the various subgroups. A simple summary statistic such as "median rank" can provide a rough description of the distribution of ranks. However, similar median ranks do not necessarily reflect similar patterns of rankings. For example, two groups of 10 subjects rank a job; for one group the ranks given are 1,2,3,4,5,6,7,8,9, and 10 and for the other, the ranks 1,1,1,1,5,6,6,6,6 and 6. Obviously, the job is being percieved differently, yet the median rank for both groups is 5.5.

The Mann-Whitney U Test was performed for each of the eighteen jobs comparing the rank distributions for experimental and control males and for experimental and control females, for each a test administration.

Table 12 presents the median job ranks and the Mann-Whitney U Test results comparing the rank distributions for the male groups. While a number of jobs were percieved differently by the experimental and control groups, no single job was so percieved for any more than one test administration. Boys in the DVEP program (experimental male group) expressed greater preference for the jobs of POLICEMAN, EXECUTIVE SECRETARY, GARBAGE COLLECTOR, COOK, TEACHER (Second Administration) and WAITER (Third Administration), than did the control school boys. For the control school boys, the jobs of LAWYER, ACTOR (Second Administration), ELECTRICIAN (Second

TABLE 12

Median Job Ranks and Mann-Whitney U Test Results for Experimental and Control Male Groups
(All Test Administrations)

	First Administration		Second Administration		Third Administration	
	Experimental	Control	Experimental	Control	Experimental	Control
Doctor	4.70	3.77	4.06	4.77	4.86	2.30*
Actress/Actor	6.50	4.90	6.60	4.69**	6.95	7.17
Nurse	11.70	12.18	11.59	12.69	12.30	12.20
Mechanic (Car)	3.42	4.58	3.77	3.42	5.17	3.37
Teacher	6.23	6.58	4.98	8.07*	6.28	7.33
Policeman	4.83	6.55*	3.71	4.90	5.36	5.80
Executive Secretary	10.58	12.54**	10.72	10.70	11.30	10.80
Waiter/Waitress	11.42	11.89	11.46	11.95	10.60	12.86**
Model	12.29	12.18	12.11	12.00	11.40	11.00
Lawyer	5.80	4.46**	4.61	4.18	3.86	5.00
Reporter	6.48	6.81	6.90	7.25	7.20	8.25
Beautician	12.80	12.17	12.45	12.53	12.75	12.58
Garbage Collector	15.21	17.10**	16.02	17.09	16.05	14.88
Cook	8.68	10.88**	11.03	10.00	8.25	11.17

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* Mann-Whitney U is significant beyond .01

** Mann-Whitney U is significant beyond .05

TABLE 12(continued)

Median Job Ranks and Mann-Whitney U Test Results for Experimental and Control Male Groups
(All Test Administrations)

	First Administration		Second Administration		Third Administration	
	Experimental	Control	Experimental	Control	Experimental	Control
Disc Jockey	7.70	8.55	7.81	7.12	5.50	4.93
Stewardess	13.34	12.50	12.37	13.05	13.21	12.50
Electrician	7.53	6.70	8.56	6.89*	9.30	8.17
Airplane Pilot	6.48	6.55	6.85	6.45	6.20	6.42

* Mann-Whitney U is significant beyond .01

** Mann-Whitney U is significant beyond .05

Administration), and DOCTOR (Third Administration) were perceived more favorably.

Table 13 presents the job ranking data and analysis for the experimental and control female groups. One job, Garbage Collector, was percieved more favorably by the DVEP girls in both the first and second test administrations. The jobs of Cook, Policeman (Second Administration), and Airplane Pilot (Third Administration) were also given significantly higher ranks by the DVEP girls than the control girls. On the other hand, the control girls expressed more positive preferences for the jobs of Doctor, Actress, Electrician, Executive Secretary, (Second Administration) and Model (Second Administration).

In general, the median ranks for all the jobs were remarkably stable over the evaluation period. Almost all the jobs retained the same relative preferability within each comparison group for all test administrations. For example, the median rank of Beautician remained approximately 13.5 for males and 6.5 for females regardless of whether they were in the DVEP project or not. This suggests that job preferences are developed early and are not easily susceptible to change.

With respect to those jobs where differences in preference were obtained, these data seem to suggest that both males and females in the experimental groups found some less glamorous jobs, for example, Garbage Collector and Cook, more acceptable than males and females in the control groups. While these jobs were still perceived as having less desirability than the other jobs, more individuals did express a greater willingness to rank these jobs higher. The control groups, on the other hand, showed higher preferences for high glamour jobs such as Lawyer, Doctor, Actress and Model. It may well be that the DVEP presentations resulted in more realistic decisions in job preferences. That is, DVEP students showed a greater willingness to prefer jobs with negative stereotypes and to prefer to a lesser degree jobs with positive images. Realistically, Garbage Collectors earn excellent money. On the other hand,

TABLE 13

Median Job Ranks and Mann-Whitney U Test Results for Experimental and Control Female Groups
(All Test Administrations)

	First Administration		Second Administration		Third Administration	
	Experimental	Control	Experimental	Control	Experimental	Control
Doctor	9.07	7.64**	6.79	6.36	7.78	6.87
Actress/Actor	4.45	3.05**	4.27	4.89	3.79	4.25
Nurse	2.63	3.00	2.62	2.47	2.79	2.69
Mechanic (Car)	13.16	13.50	13.42	14.17	13.05	12.10
Teacher	2.99	3.23	3.08	2.98	3.46	3.83
Policeman	11.49	11.85	10.78	11.60**	10.88	11.25
Executive Secretary	7.23	6.48	7.67	6.11**	8.00	6.87
Waiter/Waitress	9.33	9.20	8.66	7.93	9.08	9.90
Model	3.98	3.58	4.08	2.83*	3.46	3.08
Lawyer	11.34	10.66	10.08	10.72	9.50	11.07
Reporter	10.69	10.69	10.76	10.75	11.95	12.42
Beautician	6.00	6.72	6.51	6.24	6.45	6.70
Garbage Collector	15.91	17.40*	17.02	17.24*	17.05	16.62
Cook	5.88	7.57*	6.48	7.15	6.83	7.17

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* Mann-Whitney U is significant beyond .01

** Mann-Whitney U is significant beyond .05

TABLE 13 (continued)

Median Job Ranks and Mann-Whitney U Test Results for Experimental and Control Female Groups
(All Test Administrations)

	First Administration		Second Administration		Third Administration	
	Experimental	Control	Experimental	Control	Experimental	Control
Disc Jockey	13.17	12.55	12.32	13.00	10.96	12.25
Stewardess	6.19	6.47	8.83	8.39	6.88	7.58
Electrician	14.04	12.91*	13.48	13.15	14.31	14.12
Airplane Pilot	13.81	13.58	14.26	14.03	12.20	14.90**

* Mann-Whitney U is significant beyond .01

** Mann-Whitney U is significant beyond .05

these data can also be interpreted from the view that the DVEP project lowered the aspiration levels of the participating students. However, neither interpretation can be fully substantiated by these data since the differences were not stable over time.

The second attitude measure in the evaluation instruments was the semantic differential. This format was designed to examine the feelings work-related concepts elicit for the experimental and control groups. A sum score for eight bipolar adjective pairs represents the evaluative connotation for each concept. Again, a 2 x 2 x 2 analysis of variance design was employed to compare score differences (the rationale for this design has been previously discussed; also refer to Table 7) for each concept. The results obtained for each concept were:(See also Appendices E - P)

(1) GETTING A JOB - For the first administration, no significant score differences were found for the main factors of Sex, Grade and School. A significant F-ratio (probability level beyond .01) was obtained for the interaction of grade level and program participation. That is, sixth grade students in the experimental schools had more positive attitudes toward the concept than fifth grade students, while fifth grade students in the control schools showed more positive attitude than sixth grade students.

For the second administration, significant F-ratios (probability level beyond .05) were obtained for the factors of Sex and Grade: Girls reported a more positive attitude toward the concept than did boys; sixth graders showed more positive attitudes than fifth graders. No significant score differences were obtained for the third test administration.

(2) NEWSPAPER REPORTER _ Significant score differences (F-ratio significant beyond .01 level) were initially found for the factor of School. Students participating in the DVEP project viewed this concept more favorably than control school students.

While no significant score differences were found in the data from the second test administration both the factor of Sex and a Sex x School interaction were significant (F-ratio significant beyond .05) in the third administration. Boys, regardless of grade or program participation showed more positive attitudes to this job than did girls. Experimental (DVEP) girls, however, showed more positive attitudes than did girls in the control schools.

(3) CAREER - No significant score differences were obtained in the first test administration and the concept was not used in subsequent administrations.

(4) MAIL CARRIER - Significant score difference (F-ratio significant beyond .01 level) were found for the variable of program participation. Students in the experimental schools viewed this concept more favorably than control school students when initially tested in June, 1972. Subsequently only the factor of Grade was found to be significant(at the .05 level in the third administration). Sixth graders had more positive attitude toward this concept than did fifth graders.

(5) PLAY AND UNEMPLOYMENT - No significant score differences were initially obtained and both concepts subsequently were not used.

(6) TELEPHONE INSTALLER - While no significant score differences were obtained in the first test administration this concept was included for the remaining evaluation since the other two job title concepts did have significant results. The data from the second testing yielded significant score differences (at .05 level) due to program participation. DVEP students showed more favorable attitudes to this job than did students in the control schools.

(7) EDUCATION - Significant score differences (F-ratio significant beyond .05 level) were initially found for the factor of Sex. Girls showed more positive attitudes toward this concept than boys. This concept however, was not included in subsequent testing due to design considerations.

These data indicate that positive attitudes toward two world of work concepts were significantly increased by initial participation in the DVEP project. Both these concepts, REPORTER and MAIL CARRIER, are jobs which were identified, described and discussed in the first year of DVEP presentations for all the participating schools. Attitudes toward a third concept, TELEPHONE INSTALLER, were also effected by program participation in the later testing. It therefore, is possible to assume that the students' increased knowledge and awareness of these jobs resulted in significantly more positive attitudes toward these jobs. However, these more favorable attitudes were not maintained for the period of time between administration of the evaluation instruments.

It becomes tenuous to conclude that the DVEP project resulted in more favorable work related attitudes when the factor of time is considered.

Summary

Using a multiple-factor analysis of variance design, the main factors of grade level and program participation, were found to have a significant effect on achievement scores over the total evaluation period. A combination of these factors also had an effect on the obtained scores beyond the effect of either main factor in the initial evaluation of June, 1972. With respect to the first evaluation objective, the main effect of program participation indicated that the experimental (DVEP) schools obtained significantly higher scores than did the control schools on the achievement measures. Thus, the expectancy that the DVEP students would show greater knowledge of specific and general information relating to the occupational clusters presented in the classroom for a two-year period was realized.

In retrospect, the additional main effect of grade level should have been expected. It seems quite reasonable to expect that sixth grade students would perform better than fifth grade students as a result of greater maturation. It is, noteworthy, that for the first evaluation period the combined effect of grade level and program participation reduced the impact of grade level alone. That is, the difference in scores between fifth and sixth graders was smaller in the experimental schools than the control schools.

One note of caution must be introduced. The mean scores on the achievement measures were not uniform for all the experimental (DVEP) schools. Although several explanations for the large variation in mean scores were possible, the stability of the relative ordering of these differences from June, 1972 to February, 1973 reflected an on-going difference in the program delivery process among the DVEP schools.

With respect to the second evaluation objective, significant differences in the distribution of preference rankings for certain jobs were obtained. In order to control for sex bias in preferences, comparisons were made between experimental and control males and between experimental and control females. The significant Mann-Whitney U tests indicated that both the experimental males and females were more willing to express more positive preferences for less glamourous jobs, e.g. Cook, and less willing to accord consistently high ranks to higher glamour jobs, e.g. Lawyer, Actress. This pattern primarily occurred in the initial evaluation phase and was not maintained over time.

The semantic differential portion of the attitude measure also yielded significant data regarding the impact of the DVEP project. Again using a multiple-factor analysis design, the factor of program participation had significant although temporary effect on the attitude scores for the concepts of Reporter, Mail Carrier and Telephone Installer. The data indicated that the DVEP students had more positive evaluative feelings for these concepts than did control school students but only for one evaluation period. While these concepts represent specific jobs described in the class presentations, the results cannot wholly support the second outcome objective of the program. The inability of these favorable attitudes to be maintained over a long period of time does not reflect a true attitude change process.

OVERALL PROGRAM EVALUATION

The primary goal of the DVEP evaluation was to assess the effectiveness of the program in meeting two project objectives. The first objective was based on the outcome objective originally defined for the upper elementary school level: the program would result in greater knowledge of occupations within an array of occupational clusters. Since the second originally defined objective could not be meainingfully evaluated due to external constraints placed on the DVEP project, an alternative outcome objective was identified. This revised objective was that the program would result in more positive attitudes toward specific jobs and the world of work.

Using a multiple test, "matched" control group research design, the empirical evaluation was performed. The results indicate that the DVEP project does yield significantly more occupational knowledge and, less conclusively, does affect attitudes positively. The program, therefore, can be considered to be fulfilling this objective.

There are, however, several qualifications to the above conclusion. First, impact of the DVEP presentations was not uniform for all the participating schools. There was a substantial difference in the achievement measure performances across the project shcools. The identification and elimination of the cause(s) of these discrepancies would further maximize future program effectiveness. Second, significant differences were not continously obtained in the job preferences or attitudes toward world of work concepts for the entire evaluation period. While differences in the attitudes toward specific job concepts were obtained for at least one testing, the program cannot be considered fulfilling the second outcome objective.

A secondary goal of the DVEP evaluaton was to examine the organizational processes required for program delivery. Based on discussions with the DVEP staff, on-site observations and interviews with participating school principals and teachers, several initial problem areas in program delivery were identified. During the early period of program implementation, both the Vocational Aides and the classroom teachers were unclear about the role of the Aides in the classroom beyond their actual presentations. Given the program goal of career upgrading for the Aides, it seemed that the Aides should be seen in the role of "teacher assistants" or "student teachers." The acceptance of such a role definition on the part of the classroom teachers would depend, in large measure, on the skill development of the Aides. This related directly to another criticism of the program delivery raised in the initial discussions - that of insufficient in-service training. While the Aides are required to take education courses as part of the program, they were also required to make classroom presentations almost immediately at the onset of the program. This placed an undue strain on both the Aides and the classroom teachers. The increased responsibilities of Coordinating Teacher in the following year seemed to be directed at meeting these issues.

Although its impact on program delivery is difficult to assess, the knowledge that the DVEP project would not be refunded did have an effect. This information was known by the DVEP staff as early as October, 1972. The decreasing morale of the staff could be felt by the HSDL during the second evaluation phase in February, 1973. While it cannot be documented, the large turnover among the Aides in the Spring, 1973 could be attributable to the program termination. In general, the organization climate which resulted from knowing the project would terminate (although alternative funding sources could be and were explored), reduced the real effectiveness of the program by a substantial period of time. In fact, the combination of "gear up - adjustment" time and project "phase down" time probably limited the impact of DVEP project to the Spring 1972 and early Fall, 1973.

In summary, the implementation of the DVEP project was shown to have successfully impacted on students based on the achievement outcome objective. Students participating in the program were shown to have significantly greater knowledge of specific and general information relating to occupational clusters presented in classrooms. Students in the program also temporarily showed more positive attitudes toward specific job concepts which also were part of the program presentation. Similarly, these students temporarily showed a difference in their preferences for jobs with varying levels of occupational glamour. In the initial evaluation period, they were more willing to express preferences for jobs having less glamour but which may be more realistic and viable occupational choices.

In general, the program implementation has adhered to the original program proposal. The organizational processes required for program implementation can be considered effective using the criteria of increased knowledge and that the DVEP staff and classroom teachers felt the program meaningfully impacted on the student. The degree to which an increasingly negative organization climate in the second year of the evaluation effected the magnitude of the empirical outcomes of the program evaluation cannot be judged.

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AN EVALUATION OF THE DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

APPENDICES

August, 1973

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Appendix A

AN EVALUATION OF THE DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

Lawrence Pitterman, Vashti Adger and
Gregory O'Brien, Project Director

SUMMARY ABSTRACT

The Human Services Design Laboratory (HSDL) performed an independent evaluation of the impact and effectiveness of the Developmental Vocational Education Program (DVEP) in cooperation with Division of Research and Development, Cleveland Public Schools.

The overall goal of the DVEP project is to create a bridge between school and earning a living for students in the Model Cities area. This will be done through a career development program beginning in elementary school and continuing through high school. It will provide students with a broad base of vocation-

al information and exploratory experiences on which to base career decisions; with skill training to enable them to secure employment or to undertake future training in the field of their choice; and with actual job placement. Thus, the program is designed to increase options for making occupational decisions; to eliminate real and imagined barriers to attaining job skills; and to enhance learning achievement in all subject areas and at all education levels for the youth in Model Cities area schools.

The evaluation effort involved three distinct phases:

(1) Obtaining an overview of the DVEP project to determine the appropriate program outcome objectives to be evaluated and to examine the organizational process required for program delivery.

(2) Developing meaningful and reliable measurement instruments to assess program outcomes.

(3) Performing and reporting the empirical evaluation investigation by comparing a sample of students from the participating DVEP schools with a "matched" sample of students from non-DVEP schools.

EVALUATION OBJECTIVES

Based on a review of the proposed program objectives and their applicability to the current status of program implementation, two evaluation objectives were identified:

Objective 1: Experimental (DVEP) and control students will be compared on their specific and general knowledge relating to certain occupational clusters. Successful program implementation should result in significantly higher scores for the experimental (DVEP) students on an achievement measure of this knowledge.

Objective 2: Experimental (DVEP) and control students will be compared on their preferences for certain jobs and on their attitudes toward the world of work. Successful program implementation should result in significantly more positive attitudes for experimental (DVEP) students toward the world of work. Significant differences in the expressed job preferences also should be obtained.

INSTRUMENT DEVELOPMENT

Since the assessment of the DVEP project involved both achievement and attitudinal evaluation objectives, instrument development was directed toward obtaining meaningful and reliable measures for these objectives.

The primary emphasis of the data analysis for the content measure was on obtaining high internal-consistency reliability. Using two types of item analysis, item-diffulty and item-total correlation, a revised achievement measure was developed. The internal-consistency reliability for this measure was approximately .85. This is well above the required level of acceptability.

The data analyses for the attitudinal portions of the evaluation instrument examined the applicability of the measurement techniques. As a departure from typical attitude measures, the alternation ranking procedure yielded differential information about job preferences. A more conventional measure, the semantic differential, was employed to obtain attitudes toward world of work concepts. Revised on the basis of factor analysis data, the final form included eight work related concepts which were rated on eight bipolar adjective scales.

The use of a single summed score for these scales also resulted from the factor analyses.

A revised instrument, the Job Information Questionnaire included the content, ranking and semantic differential measures.

EMPIRICAL EVALUATION

The Job Information Questionnaire was administered to fifth and sixth grade students, who had participated in the first year of the DVEP project (experimental group),and to a comparable group of students who were not in the program (control group). Using this post-test, "matched" control group research design, the program objectives were evaluated.

KEY RESULTS - OBJECTIVE 1

1. Employing a multiple-factor analysis of variance design, the main factor of program participation was significant, Experimental (DVEP) schools obtained significantly higher achievement than control schools.
2. The same design also indicated that the main factor of grade level was significant. Sixt graders obtained significantly higher scores than fifth graders.
3. Beyond the effects of each of these main factors, the combination of both factors also was significant. The difference in obtained scores between fifth and sixth graders was smaller in the experimental (DVEP) schools than in the control schools.
4. The level of performance on the achievement measure was not consistent across all the experimental (DVEP) schools. A large variation in mean scores was obtained.

KEY RESULTS - OBJECTIVE 2

Job preference comparisons between experimental (DVEP) and control groups were made using male and female subgroups. Mann-Whitney U tests were performed to identify differences in the distribution of ranks given to each job. Attitudestoward various world of work concepts in a semantic differential were analyzed with a factor analysis of variance design.

1. Experimental (DVEP_ males assigned significantly higher ranks to the jobs of Policeman, Executive Secretary, Garbage Collector and Cook than did control males.
2. Control males assigned significantly higher ranks to the job of Lawyer than did experimental males.
3. Experimental (DVEP) females also assigned significantly higher ranks to the jobs of Garbage Collector and Cook than did control females
4. Control females assigned significantly higher ranks to the jobs Doctor, Actress, and Electrician.

This data pattern suggests that both experimental (DVEP) males and females were more willing to express more positive preferences for lower prestige jobs, e.g. Cook, and less willing to express high positive preferences for higher prestige jobs.

5. Significant effects for the main factor of program participation were obtained for the semantic differential concepts of Reporter and Mail Carrier. Experimental (DVEP) students expressed more positive attitudes toward these concepts than did control students.

ORGANIZATIONAL EVALUATION

A secondary goal of this project evaluation was to examine the current status of program evaluation and the organizational processes required for program delivery. In general, program implementation has adhered to the original program proposal. Certain external constraints placed on the project restricted a more complete implementation of activities.

Most teachers and principals with whom interviews were held indicated a favorable reaction to the concept of developmental education and were favorably impressed with program delivery. However, discussions with the DVEP staff and on-site observations, in addition to these interviews, identified two problem areas in program delivery. The first involved the skill development of the Vocational Aides and their role in the classroom beyond the actual DVEP presentations. The second involved the relationship between the DVEP material and the Social Studies curriculum into which it is injected. Both these problem areas seem to be transitory and should not be major sources of difficulty as the program achieves greater stability.

SUMMARY AND CONCLUSIONS

The primary goal of the DVEP evaluation was to assess the effectiveness of the program in meeting two outcome objectives. The first objective was based on an outcome originally defined for program implementation at the upper elementary school level; successful program implementation would result in greater knowledge relating to certain occupational cluster. The empirical investigation indicated that the DVEP project does result in significantly greater occupational knowledge for students participating in the program. However, this result was not uniform in each of the participating schools.

The second outcome objective identified for evaluation was that successful program implementation would result in more positive attitudes toward work related concepts and differences in expressed job preferences. Differences in job preferences were obtained between the experimental and control groups. These suggested that program participation affect the perceived preferability of certain jobs. Regarding the students' attitudes toward work-related concepts, the data did show more positive attitudes toward the specific job concepts of REPORTER and MAIL CARRIER, for the DVEP students. Since both concepts represent jobs described in the program presentations, the obtained differences support the desired outcome. A longer period of implementation may be necessary for differences in attitudes toward more global concepts to become manifest.

In conclusion, the DVEP project successfully impacted on the target population based on the results for the two outcome objectives.

APPENDIX B

ITEM ANALYSES

In performing the item analyses, the first type of item statistic examined was the difficulty level of each item. The basic index of difficulty level the percentage of individuals passing an item (anwering in the correct direction). In test construction, item difficulty ("p" values) is important for several interrelated reasons. First, the "p" values influence the shape and dispersion (spread) of the test scores. If the average "p" value is far removed from 50% correct responses in either direction, the distribution of test scores will tend to be biased with either very high or very low scores and the variability among these scores will tend to be very small (Nunnally, 1967). Since it is desirable to have an approximately symmetrical distribution of scores, an average "p" value of about 50% for the test items should be obtained.

The second reason for using the "p" values in the data analysis is that they relate directly to internal-consistency reliability. Internal-consistency reliability is most appropriately applied to homogeneous tests, i.e., tests composed of items which all measure the same quality to about the same degree. This type of reliability indicates how closely an obtained score comes to the score the person would have attained if the measuring instrument was perfect. Internal-consitency reliability is greatest when:

(1) The item intercorrelations are greatest.

(2) The dispersion of item scores (variance) is greatest. This occurs when the average item difficulty is approximately 50% (as discussed above).

(3) The items are of equal difficulty (Guilford, 1965)

In an effort to achieve the desirable statistical conditions of normal score distribution and high test reliability, an effort was made to select pilot instrument items whose item difficulty was between 40% and 60%.

However, the use of the item difficulty approach as the only means for selecting test items is insufficient. More important than the matter of item difficulty is the issue of whether a test item discriminates individuals in the same manner as the other test items. When items correlate positively (discriminate individuals in a similar direction; "passing" one item means "passing" other items) with one another, those items with the highest average correlations are the best items. Since such item intercorrelations are highly related to the correlations of item score with total test score, those items with the highest item-total correlations (the degree to which those individuals who "pass" the item get higher test scores) similarly can be considered the best items. More specifically, when compared to items with relatively lower correlations with total score, those items with high item-total correlations account for a greater percentage of score differences in terms of a common content factor. Thus, choosing items with the higher item-total correlations has the effect of increasing the homogeneity (internal consistency) of the test. The legitimate substitution of high item-total correlations for item intercorrelations has the additional benefit of insuring that the psychological variable measured (knowledge of occupational clusters) is uniform for all items.

APPENDIX C

JOB INFORMATION QUESTIONNAIRE

NAME:______________________________ SEX: __________

SCHOOL:_____________________________ GRADE: ________

1. FATHER'S OCCUPATION______________________________

2. MOTHER'S OCCUPATION______________________________

3. WHAT ARE THE NAMES OF THE NEWSPAPERS IN CLEVELAND?____________

____

4. WHAT ARE THE TELEVISION STATIONS ON WHICH YOU CAN WATCH T.V. SHOWS?

____

5. NAME THE LARGEST AIRPORT IN CLEVELAND?__________________

____

6. NAME THREE AIRLINES THAT FLY TO AND FROM CLEVELAND? __________

____

7. WHAT KIND OF CARD WOULD YOU NEED BEFORE YOU CAN GET A JOB?

____

8. HERE ARE SOME THINGS YOU NEED TO DO IF YOU WANT TO FIND AND GET A JOB. SHOW THE ORDER THAT YOU WOULD DO THESE THINGS BY PUTTING A 1 NEXT TO THE FIRST STEP, A 2 NEXT TO THE SECOND STEP, ETC.

________GO TO AN EMPLOYMENT SERVICE

________DECIDE WHAT KIND OF JOB YOU ARE ABLE TO GET

________READ THE HELP WANTED ADS

________GO FOR AN INTERVIEW

________TELEPHONE THE EMPLOYER

9. Underline the place where each of these jobs would most likely be found.
For example: A Reporter works at a Newspaper.

Reporter	Newspaper	Post Office	TV & Radio	Telephone
Special Delivery Messenger	Newspaper	Post Office	TV & Radio	Telephone
Copy Editor	Newspaper	Post Office	TV & Radio	Telephone
Installer	Newspaper	Post Office	TV & Radio	Telephone
Lineman	Newspaper	Post Office	TV & Radio	Telephone
Traffic Manager	Newspaper	Post Office	TV & Radio	Telephone
News Director	Newspaper	Post Office	TV & Radio	Telephone
Service Representative	Newspaper	Post Office	TV & Radio	Telephone
Parcel Post Carrier	Newspaper	Post Office	TV & Radio	Telephone
Engraver	Newspaper	Post Office	TV & Radio	Telephone
Pressman	Newspaper	Post Office	TV & Radio	Telephone
Make-up Artist	Newspaper	Post Office	TV & Radio	Telephone
Chief Engineer	Newspaper	Post Office	TV & Radio	Telephone
Broadcast Technician	Newspaper	Post Office	TV & Radio	Telephone
Sales Representative	Newspaper	Post Office	TV & Radio	Telephone
Directory Clerk	Newspaper	Post Office	TV & Radio	Telephone
Distribution Clerk	Newspaper	Post Office	TV & Radio	Telephone
Foreign Correspondent	Newspaper	Post Office	TV & Radio	Telephone
Window Clerk	Newspaper	Post Office	TV & Radio	Telephone

10. Who takes your money when you want to fly on an airplane: ?

______A. Reservation Agent

______B. Ticket Sales Agent

______C. Air Traffic Controller

______D. Airline Dispatcher

11. WHO TRIES TO MAKE YOU FEEL COMFORTABLE ON BOARD AN AIRPLANE?

_____A. FLIGHT OFFICER
_____B. CO-PILOT
_____C. STEWARDESS
_____D. AIRLINE DISPATCHER

12. WHO LOADS AND UNLOADS THE BAGGAGE ON AN AIRPLANE?

_____A. FLIGHT OFFICER
_____B. RESERVATION AGENT
_____C. AIRLINE DISPATCHER
_____D. RAMP SERVICEMAN

13. WHO HELPS THE PILOT AVOID HITTING OTHER FLYING AIRPLANES BY GIVING HIM INFORMATION OVER HIS RADIO?

_____A. AIR TRAFFIC CONTROLLER
_____B. CO-PILOT
_____C. FLIGHT ENGINEER
_____D. AIRLINE DISPATCHER

14. WRITE THE NAMES OF DIFFERENT JOBS IN A HOSPITAL. FOR EXAMPLE: A DOCTOR WORKS IN A HOSPITAL.

______________________________ ______________________________
______________________________ ______________________________
______________________________ ______________________________

15. WHICH JOB DOES NOT BELONG WITH THE OTHERS?

____A. TELEPHONE OPERATOR
____B. PROGRAM DIRECTOR
____C. SERVICE REPRESENTATIVE
____D. INSTALLER

____A. FLIGHT ENGINEER
____B. RAMP SERVICEMAN
____C. CHIEF ENGINEER
____D. PILOT

____A. PRODUCER
____B. EDITOR
____C. REPORTER
____D. PUBLISHER

16. This is a list of twenty jobs on which men and women work for a living. Read through the list to make sure you know all the jobs and think about how much you would like to work on each of these jobs. Now, decide on one job that you would really like to have more than any other. Write the name of that job in the space next to "1 - Best Job." Now, decide which job you would really not like to have. Do not wory about the reason you don't want the job. Write the name of this job in the space next to "1 - Worst Job." Continue to alternately choose between the "next worst" jobs until you you have written the names of all the jobs in the spaces. As you select each job, draw a line through it so you don't choose it twice.

Doctor
Actress/Actor
Nurse
Mechanic (car)
Teacher
Policeman
Executive Secretary
Waiter/Waitress
Model
Lawyer
Reporter
Beautician
Garbage Collector
Cook
Disc Jockey
Stewardess
Electrician
Airplane Pilot

1. "Best Job" - ____________________
2. "next Best Job" - ____________________
3. "Next Best Job" - ____________________
4. "Next Best Job" - ____________________
5. "Next Best Job" - ____________________
6. "Next Best Job" - ____________________
7. "Next Best Job" - ____________________
8. "Next Best Job" - ____________________
9. "Next Best Job" - ____________________

9. "Next Worst Job" - ____________________
8. "Next Worst Job" - ____________________
7. "Next Worst Job" - ____________________
6. "Next Worst Job" - ____________________
5. "next Worst Job" - ____________________
4. "Next Worst Job" - ____________________
3. "Next Worst Job" - ____________________
2. "Next Worst Job" - ____________________
1. "Worst Job" — ____________________

GETTING A JOB

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
MPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

NEWSPAPER REPORTER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

CAREER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
MPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

MAIL CARRIER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

PLAY

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
PORTANT ___; ___; ___; ___; ___; UNIMPORTANT

UNEMPLOYMENT

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

TELEPHONE INSTALLER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
MPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

EDUCATION

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

APPENDIX D

JOB INFORMATION QUESTIONNAIRE II

NAME: ______________________________ SEX: __________

SCHOOL: ______________________________ GRADE: __________

1. WHAT ARE THE NAMES OF THE NEWSPAPERS IN CLEVELAND? ____________________
____

2. NAME THE LARGEST AIRPORT IN CLEVELAND. ____________________

3. NAME THREE AIRLINES THAT FLY TO AND FROM CLEVELAND. ____________________
____

4. WHAT KIND OF CARD WOULD YOU NEED BEFORE YOU COULD GET A JOB? ____________
____

5. THESE ARE SOME JOBS IN THE APPAREL INDUSTRY. SHOW HOW A DRESS OR SUIT CAN BE MADE BY PUTTING THESE JOBS IN THE ORDER THEY WOULD BE NEEDED TO MAKE THE PIECE OF CLOTHING. PUT A 1 NEXT TO THE JOB WHICH MUST BE DONE FIRST, A 2 NEXT TO THE JOB WHICH SHOULD BE DONE SECOND, ETC.

__________ SEWING MACHINE OPERATOR

__________ DESIGNER

__________ CUTTER

__________ PATTERN MAKER

__________ PRESSER

6. CIRCLE TRUE FOR THE STATEMENTS WHICH ARE CORRECT AND CIRCLE FALSE FOR THE STATEMENTS WHICH ARE NOT CORRECT.

TRUE FALSE FIREMEN GIVE FIRST AID TO PEOPLE IN THEIR HOMES.
TRUE FALSE POLICEMEN DECIDE IF PEOPLE ARE GUILTY WHEN THEY ARREST THEM.
TRUE FALSE POLICEMEN HAVE TO GO TO LAW SCHOOL IN ORDER TO BE HIRED.
TRUE FALSE FIREMEN HAVE TO INSPECT BUILDINGS TO FIND OUT IF THEY ARE SAFE.
TRUE FALSE POLICEMEN HAVE TO PASS A PHYSICAL EXAMINATION WHEN THEY ARE HIRED.
TRUE FALSE FIREMEN GET THEIR BASIC TRAINING ON THE JOB.

7. Match each job with the correct description of its major duties. Write the letter next to the job the duties described. There is only one description that is correct for each job.

________ Practical Nurse

________ Nursing Aide

________ Medical Technologist

________ Physical Therapist

________ Nutritionist

A. Concerned with the bedside care of patients. For example, takes their pulse, temperature, and blood pressure.

B. Performs laboratory tests and procedures. For example, examines blood samples.

C. Gives medicine to patients. Reports and records the patients' daily condition.

D. Works with patients who have bone or muscle injuries.

E. Applies knowledge of "Good" food to improve patients' health.

F. Performs daily tasks needed to make patients comfortable. For example, makes beds and keeps room neat.

8. Which job does not belong with the other?

1.
____ A. Flight Engineer
____ B. Ramp Serviceman
____ C. Chief Engineer
____ D. Pilot

2.
____ A. Producer
____ B. Editor
____ C. Reporter
____ D. Publisher

3.
____ A. Telephone Operator
____ B. Program Director
____ C. Service Representative
____ D. Installer

9. Underline the place where each job would most likely be found.

Example: Postman

Newspaper
Post Office
T.V. Station
Telephone Company

A.

Installer	Broadcast Technician	Window Clerk
Newspaper	Newspaper	Newspaper
Post Office	Post Office	Post Office
T.V. Station	T.V. Station	T.V. Station
Telephone Company	Telephone Company	Telephone Company

Photo Engraver	Make-Up Artist	Directory Clerk
Newspaper	Newspaper	Newspaper
Post Office	Post Office	Post Office
T.V. Station	T.V. Station	T.V. Station
Telephone Company	Telephone Company	Telephone Company

B.

High and Low Lineman	Dog Warden	Sewage Plant Attendant
Police Department	Police Department	Police Department
Illuminating Company	Illuminating Company	Illuminating Company
Water Department	Water Department	Water Department
East Ohio Gas Company	East Ohio Gas Company	East Ohio Gas Company

CHEMIST

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

GEOLOGIST

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

D.

NUCLEAR ENGINEER

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

BARKER MACHINE OPERATOR

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

BLAST FURNACE WORKER

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

SUPERCALENDAR OPERATOR

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

ENGINE MECHANIC

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

PULPMAKER WORKER

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

10. WHICH ONE OF THE FOLLOWING BANK SERVICES DOES THE TELLER HANDLE MOST?

_____ A. MORTGAGE LOANS

_____ B. CREDIT CARD ACCOUNTS

_____ C. SAVINGS AND CHECKING ACCOUNTS

_____ D. CHARGE ACCOUNTS

11. WHO GIVES INFORMATION TO PEOPLE WHO COME INTO OR CALL A BUSINESS OFFICE?

_______ A. STENOGRAPHER
_______ B. RECEPTIONIST
_______ C. EXECUTIVE SECRETARY
_______ D. PUBLIC RELATIONS WORKER

12. WHO KEEPS A COMPLETE AND UP-TO-DATE RECORD OF MONEY USED IN BUSINESS ACTIVITIES?

_______ A. BOOKKEEPER
_______ B. CASHIER
_______ C. COMPANY VICE-PRESIDENT
_______ D. LAWYER

13. WHO KEEPS TRACK OF MERCHANDISE TRANSFERRED FROM ONE PLACE TO ANOTHER BY BUSINESS FIRMS?

_______ A. DISTRIBUTION WORKER
_______ B. SHIPPING AND RECEIVING CLERK
_______ C. WHOLESALER
_______ D. MARKET RESEARCHER

14. WHO HAS THE MOST FREEDOM TO CHANGE THE ROUTE OF A TRIP?

_______ A. PILOT
_______ B. TRAIN ENGINEER
_______ C. TRUCK DRIVER
_______ D. BUS DRIVER

This is a list of eighteen jobs. Read through the list to make sure you know all the jobs. Think about how much you would like to work on each of these jobs. Now, decide on the one job that you would really like to have more than any other. Write the name of that job in the space next to "1 - Best Job." Now, decide which job you would really not like to have. Do not worry about the reason you don't want the job. Write the name of this job in the space next to "1 - Worst Job." at the bottom of the page. Continue to alternately choose between the "next best job" and the "next worst job" until you have written the names of all the jobs in the spaces. As you select each job, draw a line through it so you don't choose it twice. Remember all these jobs are for both men and women.

Doctor
Actress/Actor
Nurse
Car mechanic
Teacher
Policeman
Executive Secretary
Waiter/Waitress
Model
Lawyer
Reporter
Beautician
Garbage Collector
Cook
Disc Jockey
Steward/Stewardess
Electrician
Airplane Pilot

1. Best Job ______________________
2. Next Best Job - ______________________
3. Next Best Job - ______________________
4. Next Best Job - ______________________
5. Next Best Job - ______________________
6. Next Best Job - ______________________
7. Next Best Job - ______________________
8. Next Best Job - ______________________
9. Next Best Job - ______________________

9. Next Worst Job - ______________________
8. Next Worst Job - ______________________
7. Next Worst Job - ______________________
6. Next Worst Job - ______________________
5. Next Worst Job - ______________________
4. Next Worst Job - ______________________
3. Next Worst Job - ______________________
2. Next Worst Job - ______________________

1. Worst Job ______________________

GETTING A JOB

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

NEWSPAPER REPORTER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

TELEPHONE INSTALLER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

MAIL CARRIER

GOOD ___; ___; ___; ___; ___; BAD
WEAK ___; ___; ___; ___; ___; STRONG
SAD ___; ___; ___; ___; ___; HAPPY
WISE ___; ___; ___; ___; ___; FOOLISH
BRAVE ___; ___; ___; ___; ___; COWARDLY
DIRTY ___; ___; ___; ___; ___; CLEAN
KIND ___; ___; ___; ___; ___; CRUEL
IMPORTANT ___; ___; ___; ___; ___; UNIMPORTANT

Appendix E

Mean Semantic Differential Scores for Concept of *Getting a Job* (Second Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	35.50 (N = 129)	35.35 (N = 164)	33.14 (N = 57)	35.17 (N = 70)
Female	35.72 (N = 136)	36.09 (N = 184)	34.84 (N = 81)	36.83 (N = 81)

Mean Semantic Differential Scores for Concept of *Getting a Job* (Third Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	34.72 (N = 67)	35.81 (N = 43)	36.70 (N = 20)	37.72 (N = 25)
Female	36.46 (N = 59)	36.80 (N = 46)	36.28 (N = 28)	37.65 (N = 26)

Appendix F

Analysis of Variance of Getting a Job Scores for Sex, Grade and School Variables

(Second Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	2.33	2.33	4.23 **
Grade (B)	1	2.25	2.25	4.09 **
School (C)	1	.90	.90	1.63
Sex x Grade (AxB)	1	.03	.03	.05
Sex x School (AxC)	1	.72	.72	1.31
Grade x School (BxC)	1	1.80	1.80	3.27
Interaction (AxBxC)	1	.04	.04	.07
Within Error	894	491.27	.55	
Total	901	499.33		

** F-Ratio is significant beyond the .05 level.

Appendix G

Analysis of Variance of Getting a Job Scores for Sex, Grade and School Variables

(Third Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.63	.63	.53
Grade (B)	1	1.84	1.84	1.52
School (C)	1	2.61	2.61	2.16
Sex x Grade (AxB)	1	.02	.02	.02
Sex x School (AxC)	1	1.29	1.29	1.07
Grade x School (BxC)	1	.11	.11	.09
Interaction (AxBxC)	1	.15	.15	.13
Within Error	306	369.18	1.21	
Total	313	375.83		

Appendix H

Mean Semantic Differential Scores for Concept of Newspaper Reporter
(Second Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex Male	31.63 (N = 127)	32.29 (N = 139)	30.02 (N = 57)	30.73 (N = 70)
Female	30.96 (N = 135)	31.38 (N = 184)	31.84 (N = 80)	28.94 (N = 81)

Mean Semantic Differential Scores for Concept of Newspaper Reporter
(Third Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex Male	32.34 (N = 65)	30.36 (N = 42)	32.05 (N = 20)	33.12 (N = 25)
Female	30.10 (N = 58)	32.85 (N = 46)	27.28 (N = 27)	27.65 (N = 26)

Appendix I

Analysis of Variance of Newspaper Reporter Scores for Sex, Grade and School Variables

(Second Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.30	.30	.32
Grade (B)	1	.15	.15	.16
School (C)	1	2.83	2.83	3.06
Sex x Grade (AxB)	1	1.84	1.84	1.99
Sex x School (AxC)	1	.31	.31	.34
Grade x School (BxC)	1	1.35	1.35	1.46
Interaction (AxBxC)	1	1.43	1.43	1.55
Within Error	885	816.83	.92	
Total	892	825.02		

Appendix J

Analysis of Variance of Newspaper Reporter Scores for Sex, Grade and School Variables

(Third Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	12.50	12.50	4.58 **
Grade (B)	1	.62	.62	.23
School (C)	1	3.87	3.87	1.42
Sex x Grade (AxB)	1	2.05	2.05	.75
Sex x School (AxC)	1	13.82	13.82	5.06 **
Grade x School (BxC)	1	.06	.06	.02
Interaction (AxBxC)	1	3.65	3.65	1.33
Within Error	301	822.36	2.73	
Total	308	858.93		

** F-Ratio is significant beyond the .05 level.

Appendix K

Mean Semantic Differential Scores for Concept of Mail Carrier (Second Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	33.06 (N = 128)	32.78 (N = 156)	32.34 (N = 56)	32.49 (N = 79)
Female	31.79 (N = 135)	31.68 (N = 182)	31.64 (N = 70)	32.78 (N = 81)

Mean Semantic Differential Scores for Concept of Mail Carrier (Third Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	32.52 (N = 65)	31.84 (N = 43)	31.00 (N = 17)	34.52 (N = 25)
Female	32.54 (N = 59)	35.26 (N = 46)	28.07 (N = 27)	33.58 (N = 26)

Appendix L

Analysis of Variance of Mail Carrier Scores for Sex, Grade and School Variables (Second Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.15	.15	.18
Grade (B)	1	.07	.07	.08
School (C)	1	.00	.00	.00
Sex x Grade (AxB)	1	.17	.17	.20
Sex x School (AxC)	1	1.66	1.66	1.90
Grade x School (BxC)	1	.00	.00	.00
Interaction (AxBxC)	1	.09	.09	.10
Within Error	879	766.24	.87	
Total	886	768.39		

Appendix M

Analysis of Variance of Mail Carrier Scores for Sex, Grade and School Variables (Third Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.02	.02	.01
Grade (B)	1	15.28	15.28	5.88 **
School (C)	1	3.12	3.12	1.20
Sex x Grade (AxB)	1	3.63	3.63	1.40
Sex x School (AxC)	1	6.68	6.68	2.57
Grade x School (BxC)	1	6.11	6.11	2.35
Interaction (AxBxC)	1	.25	.25	.10
Within Error	300	778.94	2.60	
Total	307	814.03		

** F-Ratio is significant beyond the .05 level.

Appendix O

Mean Semantic Differential Scores for Concept of Telephone Installer (Second Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	32.95 (N = 128)	33.43 (N = 158)	31.02 (N = 56)	32.00 (N = 70)
Female	33.12 (N = 135)	32.47 (N = 182)	31.80 (N = 80)	31.44 (N = 81)

Mean Semantic Differential Scores for Concept of Telephone Installer (Third Administration)

	Experimental Schools		Control Schools	
	5th Grade	6th Grade	5th Grade	6th Grade
Sex				
Male	32.32 (N = 65)	31.86 (N = 43)	31.47 (N = 19)	34.00 (N = 25)
Female	32.31 (N = 58)	32.41 (N = 46)	31.93 (N = 27)	34.19 (N = 26)

Appendix P

Analysis of Variance of Telephone Installer Scores for Sex, Grade and School Variables (Second Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.04	.04	.05
Grade (B)	1	.03	.03	.85
School (C)	1	4.06	4.06	5.15 **
Sex x Grade (AxB)	1	.77	.77	.97
Sex x School (AxC)	1	.13	.13	.16
Grade x School (BxC)	1	.08	.08	.10
Interaction (AxBxC)	1	.01	.01	.01
Within Error	882	694.85	.79	
Total	889	699.95		

** F-Ratio is significant beyond the .05 level.

Appendix Q

Analysis of Variance of Telephone Installer Scores for Sex, Grade and School Variables

(Third Administration)

Source of Variation	Degrees of Freedom (Df)	Sum of Squares	Mean Square	F-Ratio
Sex (A)	1	.18	.18	.07
Grade (B)	1	2.46	2.46	1.04
School (C)	1	.90	.90	.38
Sex x Grade (AxB)	1	.01	.01	.00
Sex x School (AxC)	1	.00	.00	.00
Grade x School (BxC)	1	3.32	3.32	1.41
Interaction (AxBxC)	1	.09	.09	.04
Within Error	301	709.43	2.36	
Total	308	716.39		

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APPENDIX D

CATHOLIC COMPONENT

DEVELOPMENTAL VOCATIONAL
EDUCATION PROGRAM

for the intermediate
grades

A Model Cities Project
Diocesan Education Office

1973

BEST COPY AVAILABLE

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MSGR. WILLIAM N. NOVICKY
SUPERINTENDENT OF EDUCATION

REGIONAL OFFICES 1345 WEST MARKET ST. • AKRON, OHIO 44313 • (216) 867-5370
2500 ELYRIA AVENUE • LORAIN, OHIO 44055 • (216) 244-1612

TO: Mr. William Sims, Director
Developmental Vocational Education Program

FROM: Sister Mary Owen, S.N.D., Diocesan Curriculum Director
Local Co-ordinator of the Program

RE: The One-Year Participation by the Catholic Schools

This report on the Developmental Vocational Education Program was done under my direction. Hopefully, we had envisioned a continuation of the program of sufficient duration to make it an integral part of our curriculum. The June 15th termination date lost us the opportunity of further development during the summer months. We feel, however, that what has been accomplished in so short a time by two most capable aides, Jane Ozello and Jean Dzurilla, can be used as excellent resource material as we continue to work toward a total education program.

To this end we have edited and duplicated the accompanying materials. In addition to the copies sent to you, we placed a copy in the curriculum library here at the Central Office as well as in the curriculum libraries of our regional offices.

At least the beginnings of a total career education program have been briefly outlined in the rationale and 1-8 objectives on pp. 18-20 of the accompanying materials.

Although the lesson plans on pp. 21-36 were used in grades 4-6 by the two aides, they can be adapted to use in other grades as has been indicated in the upper right hand corner.

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Developmental Vocational Education Program
School Year 1972-1973 November - June
Catholic Schools: St. Francis, Immaculate Conception, St. Vitus
Vocational Aides: Jane Ozello, Jean Dzurilla

Goals Met:

1. Student should find school more meaningful through focusing on career choices.
2. Student should develop positive attitudes toward work and become sensitive to the dignity of work.
3. Student should develop respect for an individual's capabilities
4. Student should develop a concern for responsibility

Objectives Met:

1. Student should identify and describe a greater number of occupations
2. Student should compare and contrast occupations before deciding a field of interest
3. Student should distinguish job opportunities that are available for each individual.
4. Student should demonstrate his knowledge of the mechanics for applying for a job
5. Student should recognize the importance of each job

Clusters Covered:

- Transportation
- Public Services
- Health
- Construction
- Apparel
- Communication
- Business and Office

Lesson plans, Materials used, and Bulletin Board outlines are attached.

Total number of students involved -- 241
St. Vitus -- 131
St. Francis -- 55
Immaculate Conception -- 55

LESSONS

A. Transportation (11 total)

1. Slides - Orientation D.V.L.P.
   Bulletin Board - pictures

2. Shipping
   a) Play-acting - occupations
   b) Film: "Seaport" -- Visual Aide Center

3. Shipping
   a) Reports by the students
   b) Slides -- Cleveland Port -- Cleveland World Port Booklets

4. Trains
   a) Song on trains: Silver Burdett, Record #6, "This Train"
   b) Booklet of Railroads -- Assn. of American Railroads
      Penn Central Railroad
      Penn Central Station
      Pittsburgh, Pa. 15222
      --Approaching 1973; A progress report on Penn Central Trans.
      --A Sharp Deal for Uncle Sam
      --The Human Side of R.R.
      --Railroads Unlimited
   c) Crossword Puzzles
   d) Built train: use of flashcards and construction paper cut-outs

5. Review lesson - trucks
   a) Riddle Bulletin Board
   b) Pamphlets on trucks
      White Motors Corp.
      79th and St. Clair
   c) Table Presentation - construction paper models and model cars, trains and environment

6. Trucks
   a) Game: Tell what's inside the bag (4 trucks representing different jobs)
   b) Film: "Lifeline on Wheels"
      White Motors Corp.
      431-2000
      Mr. G. Garret
   c) Flash Cards

7. Trucks
   a) Mimeograph Sheets -- fill out freight form (White Motor Corp.)

8. Airplanes
    a) Sheet on airplane and airport occupations
    b) Slides -- 3M Machine
        United Airlines
            --flight career qualifications
            --pamphlet "Join the Friendly Skies of United Airlines"
    c) Matching Game

9. Transportation
    a) Field trip: Auto Aviation Museum
        Western Reserve Historical Society
        10825 East Blvd.
        721-5622

10. Transportation
    a) Panel discussion
        Maps, magazine pictures

11. Review -- Riddle Board
    "Educational Opportunities", Women's Army Corps

B. Cluster of Public Services

1. Police and Fire, Postal Services
    a) Scramble Cards at board
    b) Problem-solving situation
    c) Slides - 3M Machine
    d) How to address a letter
    e) Secret message code sheets

2. Telephone
    a) Teletrainer: Ohio Bell
        --a communications telephone program
        --pamphlet "Especially For YOU"
        --Charts
    b) "Wonderful World of Cleveland"
        Ohio Bureau of Unemployment Compensation, 1965

3. Telephone
    a) Speakers: Lt. Morgan of Fire Dept.
        (Call Main Fire Station)
        Officer Kaitsburg of Police Dept.
        (Call Main Station)

4. Gas and Water
    a) Maps, meter reading
    b) Game: Tic-Tac-Toe
    c) Bulletin Board -- T.V. Tube

C. Cluster of Health

- 1. Health
  - a) Problem-solving situations
  - b) Film - "Health Careers"
    Visual Aide Center
  - c) X-rays -- various hospitals
  - d) Word scramble
  - e) Bulletin Board
  - f) Crossword Puzzle

D. Cluster of Construction

- 1. Construction
  - --viewed pictures
  - --blue prints
  - --Bulletin Board -- built house in relationship to jobs
  - --Construction slides - D.V.E.P.

E. Apparel Industry (1 lesson)
- --used materials (fabrics)
  crocheting needles
  patterns
- --apparel slides -- Richman Brothers
- --handout on jobs (construction and apparel)

F. Communication (6 lessons)
- --newspaper - wrote an article about school
  viewed newspaper
  field trip -- Cleveland Plain Dealer (2 schools)
  -- Emerson Press (1 school)
- --television - T.V. guide
  Slides - D.V.E.P.
  Game
- --radio - tape recording of students as disc jockey
  handout -- Job/Description/Skills

G. Getting A Job (1 lesson)
- --Social Security Card
- --Job Application form -- White Motors Corp. - handout

H. Fine Arts and Humanities (1 lesson)
- --related jobs to T.V. programs
  - ex. Partridge Family - Singers, Musicians
  - Bewitched - Commercial Artist
- --role play game
  - students acted out job and class guessed

I. Consumer Homemaker (1 lesson)
- --students defined job and illustrated them as a cartoon
- --dictionaries

J. Manufacturing -- preparation for NASA -- field trip
- --films "Airplanes Work For Us"
  "Airplanes And How They Fly"
- --NASA - 2 schools

K. Review lessons
- --Popeye comic book series on jobs -- excellent -- D.V.E.P.
- --Games - riddle boards
  bulletin boards
  bag full of riddles
- --Panel discussions
- --Trip: Goodtime Cruise Lines (3 schools)
  (final trip)
  U.S.S. Cod (1 school)

L. Business and Office (Banking) (1 lesson)
- --Film: "Money In the Bank", D.V.E.P.

STUDENTS COMMENTS

At the beginning of the year we took a survey of the students career choices at this time in their life. Many chose public service: health, teacher, sports, construction, and transportation jobs. The students tended to follow their parents careers. In June, we asked the same question and very little change was made on their choices but their awareness level of jobs was increased.

The students comments on career education's likes and dislikes were voiced. Most were pleased with the information received and lessons as they were presented. They commented on the diversity of material and the range of interests it covered. Activity was the key to holding their interest.

Student's quotes:

"It helped us learn things we did not know"
"We can decide better what we want to be in the future"
"It was interesting finding out about other persons' jobs"

DEVELOPMENTAL VOCATIONAL EDUCATION

Period from Oct. 23, 1972 - Feb. 9, 1973

Major Activities and Accomplishments

a) Orientated to D.V.E.P.

b) Orientated to Catholic Curriculum with Sr. Owen - 10-10-72
Incorporated D.V.E.P. into Catholic Curriculum that week.

c) Orientated D.V.E.P. to classroom teachers and principals of schools involved. Described and explained the goals, objectives, and procedures. Week of 10-16-72.

d) Orientated students to D.V.E.P. with presentation of the meaning of the program and the clusters. 10-23-72.

e) Covered clusters of Transportation: air, train, ship, and truck
Public Services: police, fire, postal services, and telephone services
Health

f) 2 field trips with the schools of Immaculate Conception (5th and 6th) and St. Vitus (one 5th grade and one 6th grade) to Auto-Aviation Museum to culminate cluster of Transportation.

g) Speakers brought into 2 schools
Police - Immaculate Conception
Fire - St. Francis

h) Mrs. Mosley from telephone company observed a class at St. Vitus (grade 6)

i) Places contacted for more information, pamphlets or books
1. Cleveland Port - handbooks
2. White Motor - pamphlets, film, and trucking forms
3. Police Dept. - Lt. Kreitsburg
4. Fire Dept.
5. Telephone Co. - Mrs. Mosley - use of the teletrainer
6. Received x-rays from hospital
7. Interviewed by Catholic Universe Bulletin. Pictures taken at the schools with the children. This was supposed to be in Feb. 2 edition. It was not, but will be placed in one of the future editions.

j) Lessons have consisted of a variety of techniques: discussions, plays, films, slides, table representations and projects, bulletin boards were made and placed in rooms, actual participation in doing some aspect of the job, reports, filling out business forms, role-playing, cross-word puzzles, codes, problem solving.

RESULTS:

Clusters of Public Service and Health Occupations

5th Grade - Sr. Gertrude
St. Vitus - Jean Dzurilla, Vocational Aide
Public Services and Health

Pre-Test		Post-Test	
A's	0	A's	8
B's	0	B's	16
C's	2	C's	6
D's	7	D's	7
F's	28	F's	0
	37		37

5th Grade - Mr. Pengov
St. Vitus - Jean Dzurilla, Vocational Aide
Public Services and Health

Pre-Test		Post-Test	
A's	0	A's	6
B's	1	B's	12
C's	7	C's	1
D's	8	D's	9
F's	14	F's	2
	30		30

6th Grade - Mrs. Mollie
St. Vitus - Jean Dzurilla, Vocational Aide
Public Services and Health

Pre-Test		Post-Test	
A's	0	A's	11
B's	1	B's	16
C's	4	C's	2
D's	10	D's	1
F's	16	F's	1
	31		31

6th Grade - Sr. Ceciliamarie
St. Vitus - Jean Dzurilla, Vocational Aide
Public Services and Health

Pre-Test		Post-Test	
A's	2	A's	22
B's	4	B's	7
C's	11	C's	2
D's	2	D's	0
F's	12	F's	0
	31		31

RESULTS:

Clusters of Public Services and Health

5th Grade - Miss Nemeth
Immaculate Conception - Jean Dzurilla, Vocational Aide
Public Service and Health

Pre-Test		Post-Test	
A's	0	A's	5
B's	0	B's	9
C's	1	C's	4
D's	1	D's	3
F's	21	F's	2
	23		23

6th Grade - Sr. Jean
Immaculate Conception - Jean Dzurilla, Vocational Aide
Public Service and Health

Pre-Test		Post-Test	
A's	2	A's	8
B's	5	B's	12
C's	2	C's	4
D's	7	D's	2
F's	10	F's	0
	26		26

Immaculate Conception
Pre-Post testing on materials dealing with Public Services and Health
Number of students N= 49

Pre-Test			Post-Test		
Grade	Frequency	Percent of Total	Grade	Frequency	Percent of Total
A	2	4	A	13	26
B	5	10	B	21	42
C	3	7	C	8	17
D	8	17	D	5	11
F	31	62	F	2	4
	N=49	100		N=49	100

Grade of C or Above - Pre-Test - 21%
Grade of C or Above - Post-Test - 85%

Increase -- 64%

St. Vitus
Pre-Post testing on materials dealing with Public Services and Health
Number of students N=129

Pre-Test

Grade	Frequency	Percent of Total
A	0	0
B	6	5
C	24	24
D	27	25
F	70	46
	N=129	100

Post-Test

Grade	Frequency	Percent of Total
A	47	37
B	51	40
C	11	10
D	17	13
F	3	0
	N=129	100

Grade of C or Above - Pre-Test - 29%
Grade of C or Above - Post-Test - 87%

Increase - 58%

St. Vitus
Pre-Post testing on materials dealing with Transportation
Number of students N=131

Pre-Test				Post-Test		
Grade	Frequency	Percent of Total		Grade	Frequency	Percent of Total
A	5	4		A	56	40
B	32	24		B	45	31
C	33	25		C	20	14
D	19	13		D	15	11
F	42	34		F	5	4
	N=131	100			N=131	100

Grade of C or Above - Pre-Test - 53%
Grade of C or Above - Post-Test - 85%

Increase 32%

6th Grade - Sr. Jean
Immaculate Conception - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	7	A's	15
B's	5	B's	9
C's	8	C's	4
D's	5	D's	0
F's	3	F's	0
	28		28

5th Grade - Miss Nemeth
Immaculate Conception - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	0	A's	5
B's	1	B's	11
C's	7	C's	3
D's	6	D's	4
F's	11	F's	2
	25		25

Immaculate Conception
Pre-Post testing on materials dealing with Transportation
Number of students N=53

Pre-Test			Post-Test		
Grade	Frequency	Percent of Total	Grade	Frequency	Percent of Total
A	7	12	A	20	38
B	6	11	B	20	38
C	15	32	C	7	12
D	11	21	D	4	8
F	14	24	F	2	4
	N=53	100		N=53	100

Grade of C or Above - Pre-Test - 55%
Grade of C. or Above - Post-Test - 88%

Increase -- 33%

Intermediate - Miss Garbo
St. Francis - Jane Ozello, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	0	A's	7
B's	1	B's	6
C's	4	C's	3
D's	5	D's	3
F's	14	F's	5
	24		24

Intermediate - Miss Schade
St. Francis - Jane Ozello, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	0	A's	2
B's	0	B's	10
C's	6	C's	4
D's	3	D's	2
F's	15	F's	6
	24		24

St. Francis
Pre-Post testing on materials dealing with Transportation
Number of students N=48

Pre-Test			Post-Test		
Grade	Frequency	Percent of Total	Grade	Frequency	Percent of Total
A	0	0	A	9	19
B	1	2	B	16	34
C	10	22	C	7	14
D	8	16	D	5	10
F	29	60	F	11	23
	N=48	100		N=48	100

Grade of C or Above - Pre-Test - 24%
Grade of C or Above - Post-Test - 67%

Increase -- 43%

Intermediate - Miss Garbo
St. Francis - Jane Ozello, Vocational Aide
Health and Public Service

Pre-Test	
A's	0
B's	4
C's	5
D's	3
F's	14
	26

Post-Test	
A's	6
B's	10
C's	6
D's	3
F's	2
	28

Intermediate - Miss Schade
St. Francis - Jane Ozello, Vocational Aide
Health and Public Service

Pre-Test	
A's	0
B's	0
C's	2
D's	8
F's	15
	25

Post-Test	
A's	4
B's	11
C's	2
D's	4
F's	4
	25

St. Francis
Pre-Post testing on materials dealing with health and public service.
Number of students in total -- Approximately 51

Post-Test

Grade	Frequency	Percent of Total
A	10	19
B	21	40
C	8	15
D	7	13
F	6	11

N = 51

Pre-Test

Grade	Frequency	Percent of Total
A	0	0
B	4	8
C	7	14
D	11	22
F	29	57

N = 51

Since we were going into the classroom only once per week, we felt that a lot of time would be stolen from our lesson if we gave a pre-test and post-test before each area in the cluster of transportation. Therefore we combined the pre-tests of the four areas omitting questions and then administered the pre-test. After we completed the cluster, the post test was given. We also did the same with the clusters of Public Services and Health. We combined the occupations involved with the areas of police, fire, postal services, telephone and health. The post-test concerning Public Services and Health has not been given yet so the results are not listed.

6th Grade - Sr. Ceciliamarie
St. Vitus - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	2	A's	13
B's	12	B's	12
C's	5	C's	5
D's	8	D's	1
F's	4	F's	0
	31		31

6th Grade - Mrs. Mollie
St. Vitus - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	0	A's	10
B's	5	B's	9
C's	11	C's	4
D's	4	D's	7
F's	11	F's	1
	31		31

5th Grade - Mr. Pengov
St. Vitus - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test		Post-Test	
A's	1	A's	10
B's	4	B's	11
C's	8	C's	8
D's	3	D's	1
F's	16	F's	1
	34		32

5th Grade - Sr. Gertrude
St. Vitus - Jean Dzurilla, Vocational Aide
Transportation

Pre-Test				Post-Test			
A's	2	C's	9	A's	13	C's	3
B's	11	D's	4	B's	13	D's	5
		F's	11			F's	3

PROBLEMS IN ADMINISTERING:

There were no major problems in administering the tests. The questions were read aloud and time was allotted for answering. We have studied 3 clusters so some of the questions on the test could be answered with the knowledge they received from the study. Some of the questions were confusing because those points were not stressed in our lessons. Also the titles given to certain occupations were different. We used the title DIETICIAN instead of NUTRITIONIST. Although the material was presented in class, I feel a drill would be necessary to really answer some of the questions. For instance, the Health Occupations. They were familiar with most of the jobs on page 6. Page 7 was hard for us. Maybe more explanation was needed. I think only 3 lines were needed and would have been better for us. Good ___; ___; ___; Bad, etc.

EVALUATION:

We entered the classroom during the last week of October, 1972. We gave a presentation of the program to the students then, and the week after, started in to the cluster of Transportation. We covered the four areas: shipping, trains, truck, and plane. We took in a field trip relating to this cluster. The cluster that followed was Public Services. We discussed police, fire, postal services and the telephone company and its services. We had speakers come from the police and fire to explain and demonstrate in better detail their job and equipment they use.*

We have been well-accepted at all 3 schools. The students have commented that they now know more about Cleveland and can relate better to the material in the news. It has increased their vocabulary knowing the correct terminology for the occupations. They have said they like career education better than their social studies class. The teachers like our approaches in discussing occupations. They themselves have found our lessons to be interesting, knowledgeable, and enjoyable. I feel that most of the teachers do follow-up and review the material covered in our classes (career ed.) during their own class time. When we first started, it took us a long time to cover a cluster. We were going in to a lot of detail with the jobs in our one-day-a-week-45-minute period and it would take 2 to 3 weeks to cover one aspect of the cluster. I feel it necessary that the regular classroom teacher keep in mind the material covered and include it with their lesson. The student will benefit more and more clusters can be introduced and covered.

*The cluster of Health Occupations has also been discussed.

DEVELOPMENTAL VOCATIONAL EDUCATION - JOB INFORMATION QUESTIONNAIRE

DESCRIPTION:

1) SCHOOL: Immaculate Conception
GRADE: 5
DATE: Feb. 7, 1973
TIME: 50 minutes
NO. OF STUDENTS: 25
TEST NOS.: 0060-0084

2) SCHOOL: Immaculate Conception
GRADE: 6
DATE: Feb. 7, 1973
TIME: 35 minutes
NO. OF STUDENTS: 27
TEST NOS.: 0085-0111

3) SCHOOL: St. Vitus
GRADE: 6 - Sr. Caciliamarie
DATE: Feb. 8, 1973
TIME: 35 minutes
NO. OF STUDENTS: 33
TEST NOS.: 0112-0144

4) SCHOOL: St. Vitus
GRADE: 6 - Mrs. Mollie
DATE: Feb. 8, 1973
TIME: 40 minutes
NO. OF STUDENTS: 31
TEST NOS.: 0145-0175

5) SCHOOL: St. Vitus
GRADE: 5 - Mr. Pengov
DATE: Feb. 8, 1973
TIME: 55 minutes
NO. OF STUDENTS: 33
TEST NOS: 0176-0208

6) SCHOOL: St. Vitus
GRADE: 5 - Sr. Gertrude
DATE: Feb. 8, 1973
TIME: 40 minutes
NO. OF STUDENTS: 34
TEST NOS.: 0209-0242

NO. OF CLASSES: 6
NO. OF 5TH GRADES: 3 - - - - - - - - - -25
NO. OF 6TH GRADES: 3 - - 27 33
33 34
31 92
91

NO. TOTAL - 183

CAREER EDUCATION

A Correlated Instructional Program for Grades 1-8

RATIONALE

This career education program has been adapted from a pilot government project. The Developmental Education Program has been taught in our schools, 1972-73 school year.

Although it has been set up to correlate with the social studies curriculum, it can easily be incorporated into other subject areas.

This program is intended to meet the needs of the students in our schools with their present organizational framework. The program is flexible enough to allow emphasis to be placed on specific career choices in a particular area.

Career education has not been an integral part of our academic instruction. Incorporating this into our curriculum will enable students to choose a career not by chance but by design. It will play a part in almost every facet of the students' educational experience, beginning in the earliest grades continuing throughout his future. Rather than being limited to job skill training, it seeks to engage the student across a broad spectrum, including his attitude toward work, his awareness, his own talents, potential, interests, and his ability to make an informed and intelligent decision.

The development of the program was influenced by the following considerations:

- --an unbiased positive view toward all occupations is essential to the selection of an appropriate occupation.
- --an attitude of appreciation for God's gift of individuality and distinctive qualities given to all is essential.
- --the objectives and activities are selected to coincide with the developmental stages of intellectual growth.

At the primary level the student will become aware of the community, systems and services available. The emphasis at the intermediate level will be on providing the student with a broad base of occupational information and orientating them toward the world of work. The program at the junior high level will move into an orientational exploratory phase, where the students will continue to learn about the wide range of occupational choices available but will begin to sample different occupational areas more deeply, and participate in actual experiences. The activities are designed to enable the student to be in a better position to make the next step in their career development.

INSTRUCTIONAL GOALS

To assist the children in understanding and profiting from their living experiences as they become aware, explore in, and prepare for their career choices, this program has the following instructional goals:

Through the experiencing of an organized developmental program of career education, the students should:

--develop positive attitudes toward work and become sensitive to the dignity of work.

--accept responsibility for developing good work habits.

--use effectively their understanding of reciprocal relationships involving women, men, work, and the environment.

--find school more meaningful through focusing on career choices.

--analyze occupations in relationship to their specific career.

--develop a respect for each individual's capabilities.

INSTRUCTIONAL OBJECTIVES

In order to reach these goals, the student should:

Grade 1

1) state some services provided in her community.
2) recognize the services as occupations.

Grade 2

1) recall present (past) knowledge of occupations and group into occupational families.
2) recognize differences in occupational families.

Grade 3

1) be aware of occupational families.
2) be conscious of the differences in abilities pertaining to each occupation.
3) discuss the effects of developing potential to its fullest.

Grade 4

1) identify and describe a greater number of occupations.
2) recognize the importance of each job.
3) distinguish job opportunities that are available for each individual.

Grade 5

1) Indicate the kinds of education needed for a specific career.
2) investigate more thoroughly 7 of the 15 clusters.
3) identify some tools and equipment needed for these occupations.

Grade 6

1) expand present knowledge to include remaining 8 clusters.
2) develop greater knowledge of the operation and uses of basic tools and equipment.
3) compare and contrast these occupations before deciding a field of interest.
4) demonstrate knowledge of the mechanics for applying for a job.

Grade 7

1) expand knowledge of the requirements of occupations..
2) increase knowledge of the operations involved in a wider variety of occupations.

Grade 8

1) acquaint self with the materials used in a range of occupations.
2) experience actual occupations through manipulation of these materials.
3) accept the responsibility of selecting fields of interest.

Lesson #1

DEVELOPMENTAL VOCATIONAL EDUCATION

Title:	Orientation to D.V.E.P.
Goal:	Students should develop an interest in D.V.E. Program
Objectives:	Students should derive general information about D.V.E.P.

(a) students should be acquainted with program
(b) student should define occupation and cluster
(c) student should recognize 15 clusters

Obj.	Learning Experience	Materials	Evaluation
a	1. Introduction of program.	Developmental Vocational Education is written on board.	
b,c	1. Pass out pictures, child will view and discuss 2. Oral description by student. Place on bulletin board relating to specific cluster. 3. Define occupation. (What are these people doing). Meaning of D.V.E.P.	Pictures Bulletin Board	
a,b,c	1. Survey Adult - occupation place cluster Interest - occupation cluster	Mimeograph sheets	Were the studen able to relate to the cluster?

(1) An adult in my family ____________________
(occupation, place of employment, and cluster if possib

(2) I would like to be ____________________
(occupation, and cluster if possible)

Lesson #2

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Shipping

Goal: Student should develop an interest in shipping occupations.

Objectives: Student should identify and describe a greater number of occupations in shipping.

(a) student should define the term, transportation
(b) student should describe the following occupations from the film; pilot, engineer, mater, deck hand, shipping clerk, and longshoreman.
(c) student should describe management of harbor traffic, maintenance of a ship, and handling/distribution of cargo.

Obj.	Learning Experience	Materials	Evaluation
a	1. Review past lesson	Cluster and Occupation written on board.	Can student recall?
a	2. Define transportation		Can student define?
a	3. Intro. into shipping Who traveled and settled here? How? Type of Trans.?		
	4. Pre-test	Mimeograph sheet	
	5. Role Play - Captain Breakfast, sir? - cook, galley Refuel? - deck hands, engineer Travel N or S? - navigator Cargo movement? - longshoreman		
b,c	6. Film; Seaport	Film	Were the students able to answer the questions about the film and describe other jobs?
	7. Discussion	Written on board management of harbor traffic, maintenance of ship, handling/distribution of cargo - bulk, general, other jobs.	
b	8. Assign reports on shipping occupations		

DEVELOPMENTAL VOCATIONAL EDUCATION

Film: Seaport

Introduction: President Cleveland, name of ship, arrives and the captain of this ship explains many of the seaports operations. Other ship employees and seaport workers explain how their own jobs contribute to the life of the seaport - management of harbor traffic, maintenance of ships and the handling and distribution of cargo.

Discussion: Management of harbor traffic - calm waters and tugboat

Maintenance of ships - dry dock; for repairs

Handling and distribution of cargo - longshoreman; two kinds of cargo; bulk and general

Other jobs - truckdriver, longshoreman, ship captain, ship engineer, navigator, custom officer, etc.

NAME________________________________ DATE________________________

Part I. True or False

_____ 1. Shipping employees work only on the ships.

_____ 2. Engineers pilot ships.

_____ 3. Ship officers work their way up from the bottom.

_____ 4. Deck hands perform manual tasks.

_____ 5. The mate assists the pilot.

Part II. Multiple Choice

1. The shipping industry is (A) a) growing b) closing down c) only for men.
2. Transportation or cargo by ship costs (C) a) more than it does by truck b) just as much as it does by truck, train, or plane c) less than it does by truck, train, or plane.
3. Engineer's are responsible for the ship's (A) a) power b) food c) navigation
4. A ship's kitchen is called the (C) a) deck b) crew c) galley
5. Most ships on inland waterways are inspected by the (A) a) Navy b) Army c) Coast Guard

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Shipping

Goal: Same as lesson #2

Objectives: Same as lesson #2

Obj.	Learning Experience	Materials	Evaluation
c	1. Student reports 2. Cleveland port 3. Chart facts	Slides Mimeograph sheet (copy attached)	Was child able to use resource

Lesson #4

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Shipping

Goal: Same as lesson #2

Objectives: Same as lesson #2

Obj.	Learning Experience	Materials	Evaluation
c	1. Student reports		Was student abl to use resourc
	2. Cleveland Port	Slides	
	3. Chart facts and jobs	Mimeographed sheet	
	4. Sing song on shipping	Record	

Transportation -- Shipping

Facts	Jobs
Employees work on land and ship	Pilot -- navigates ships
Industry is growing	Engineer -- responsible for operating and maintenance of ship
Cost less than it does by train, truck, plane	Mate -- assists pilot in operation of ship
Ships are inspected by the Navy	Deck hand -- performs manual tasks of involved in running of ship
Ship's kitchen is called a galley	Shipping clerk -- keeps records of goods
International port	Stevedore — hires people, a company
Tugboat tows ships	Longshoreman -- transfers cargo from ship to dock, leads the ship.
	Merchant seamen -- maintain decks and other areas of the ship
	* officers are promoted as experience and knowledge increase.

DEVELOPMENTAL VOCATIONAL EDUCATION

NAME________________________________ DATE________________

*TRANSPORTATION -- SHIPPING

Facts	Jobs

NAME ______________________________ DATE ________________

Part I. True or False

F 1. Shipping employees work only on the ships.

T 2. Engineers pilot ships.

T 3. Ship officers work their way up from the bottom.

T 4. Deck hands perform manual tasks.

T 5. The mate assists the pilot.

Part II. Multiple Choice

1. The shipping industry is A . a) growing b) closing down c) only for men

2. Transportation of cargo by ship costs C . a) more than it does by truck b) just as much as it does by truck, train, or plane c) less than it does by truck, train, or plane.

3. Engineer's are responsible for the ship's A . a) power b) food c) navigation

4. A ship's kitchen is called the C . a) deck b) crew c) galley

5. Most ships on inland waterways are inspected by the A . a) Navy b) Army c) Coast Guard

NAME ______________________________ DATE ________________

Part I. True or False

_____1. Shipping employees work only on the ships.

_____2. Engineers pilot ships.

_____3. Ship officers work their way up from the bottom.

_____4. Deck hands perform manual tasks.

_____5. The mate assists the pilot.

Part II. Multiple Choice

1. The shipping industry is _________. a) growing b) closing down c) only for men

2. Transportation or cargo by ship costs _______. a) more than it does by truck b) just as much as it does by truck, train, or plane c) less than it does by truck, train, or plane.

3. Engineers are responsible for the ship's ______. a) power b) food c) navigation

4. A ship's kitchen is called the ________. a) deck b) crew c) galley

5. Most ships on inland waterways are inspected by the __________. a) Navy b) Army c) Coast Guard

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Trains/Railroads

Goal: Student should develop an interest in railroad occupations

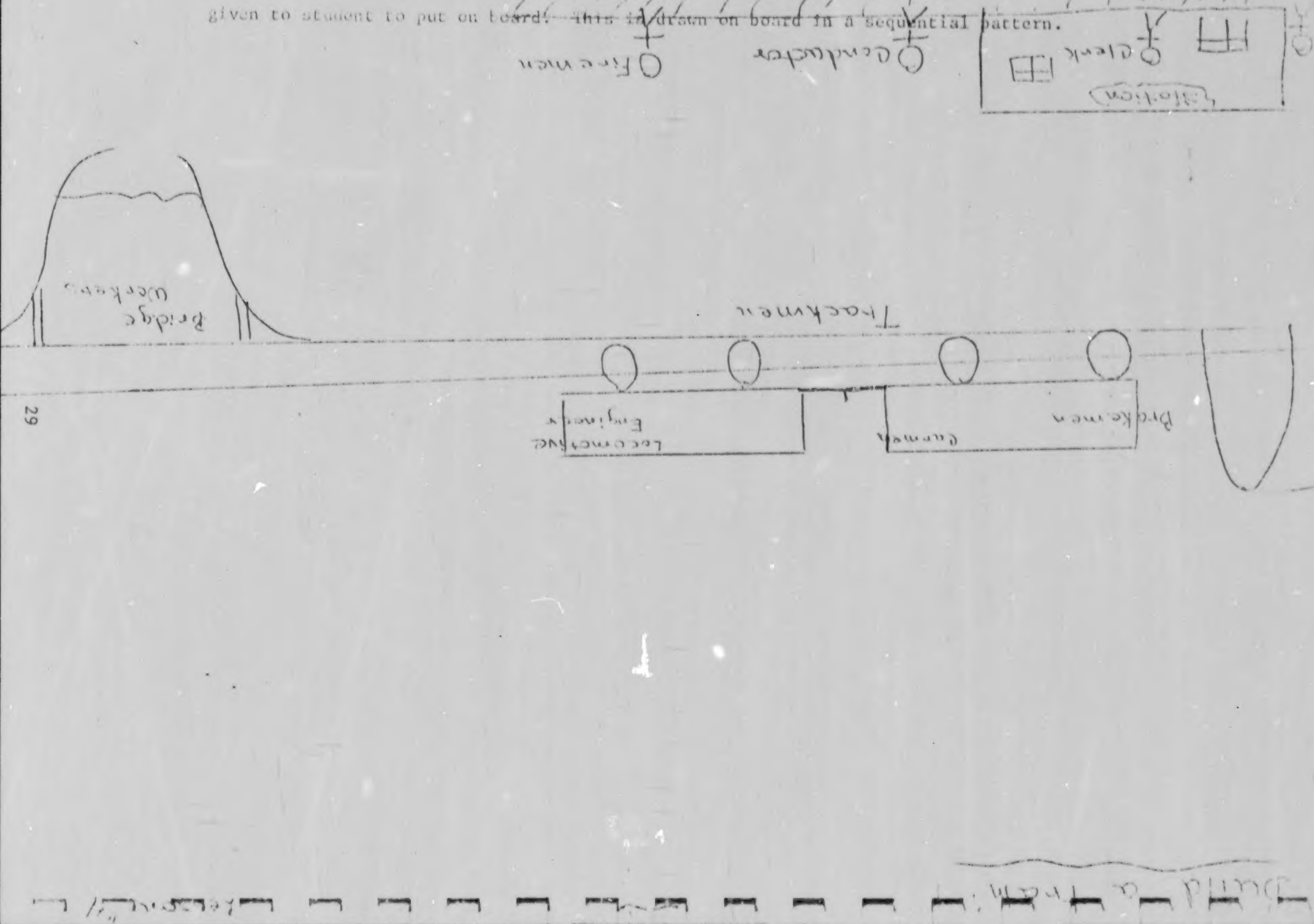
Objectives: Student should identify and describe a greater number of occupations in the railroad system.

(a) student should recognize the importance railroad past and present

(b) student should describe the following occupations; trackmen, locomotive engineer, brakeman, conductor, station agent, clerk, carmen, firemen, and bridge workers.

Obj.	Learning Experience	Materials	Evaluation
	1. Song about R.R.	Silver Burdett Record #6 "This Train"	
a.	2. Introduction relating to the history of the R.R. -importance of R.R. and growth of U.S. -first R.R.	Booklet - R.R. of America	Can student describe importance of R.R. to America
a,b	3. Describe individual jobs -pass out card and describe job (ask questions) in sequence by building a train 1. trackmen 2. bridge workers 3. carman 4. locomotive engineer 5. fireman 6. conductor 7. brakeman 8. station agent 9. clerk	Flash cards Chalkboard	Was student able to relate to each job?
b	4. Definitions 5. Supplementary - for students individual research if so desires	Crossword puzzle Booklet-R.R. of America	Could student define each job?

PURPOSE: Student should build train seeing that each job is interdependent on another. Flash cards are given to student to put on board. This is drawn on board in a sequential pattern.


Station
Clerk
Conductor
Firemen
Brakemen
Carmen
Locomotive Engineer
Trackmen
Bridge Workers
Build a train

DEVELOPMENTAL VOCATIONAL EDUCATION PROGRAM

LOCOMOTIVE ENGINEER -- works the throttles, air brakes, other controls, and checks the condition of the locomotive. He must observe track signals and comply with speed restrictions at all hours and in all conditions. He must be alert constantly, especially for obstructions on the track or other emergencies.

FIREMEN -- works with locomotive engineer. Checks to see if the locomotive is supplied with the fuel, sand and water needed for the run, that the engine is in proper working order. He checks the flagging equipment. He acts as lookout for obstructions on tracks and road crossings, inspects the train on curves for sparks, smoke or fire and any other defects.

CONDUCTORS -- safety of the passengers and cargos. Supervise work of the train and engine crews, takes care of any emergency that may occur on the run.

BRAKEMEN -- work with conductor, tools and equipment are in their proper place, at stops -- they make walking inspections of the cars in the train, regulate heat, light and air-conditioning on a train.

STATION AGENT -- calculate freight and express packages, deliver train order.

CLERKS -- paper work; collect bills, investigate complaints, adjust claims, tracing shipments, selling tickets and bookkeeping.

TRACKMEN -- look for cracked rails, weak ties, other track and road defects. Heavy maintenance work.

BRIDGE WORKERS -- skilled craftsmen, carpenters, bricklayers, plasterers, ironworkers.

CARMEN -- car inspectors that check cars that might lead to accidents and/or delay.

DEVELOPMENTAL VOCATIONAL EDUCATION

Basic History of the Railroad

Benefits of the R.R.
- --settled west
- --growth of cities near R.R.
- --brought farm machinery west
- --brought raw materials
- --R.R. usually build near shores
- --helped with the exchange of products (How would we get wheat from the West)
- --tied countries together making them a united nation
- --provided fast dependable, low cost, high volume transportation
- --delivered troops
- --expanded our nation
- --R.R. employed in every state except Hawaii

First R.R. in 1830 -- opened "railroad era"
- --13 million people lived east of Mississippi
- --new towns
- --increase in productivity
- --opened regions of farming, mining, lumber, and manufacturing
- --Congress aided construction of R.R. 1850 -- 1st land grant
- --Page 11-12; "Railroads in America" -- picture showing the expansion of R.R.
- --type of power changed over the years from steam to diesel

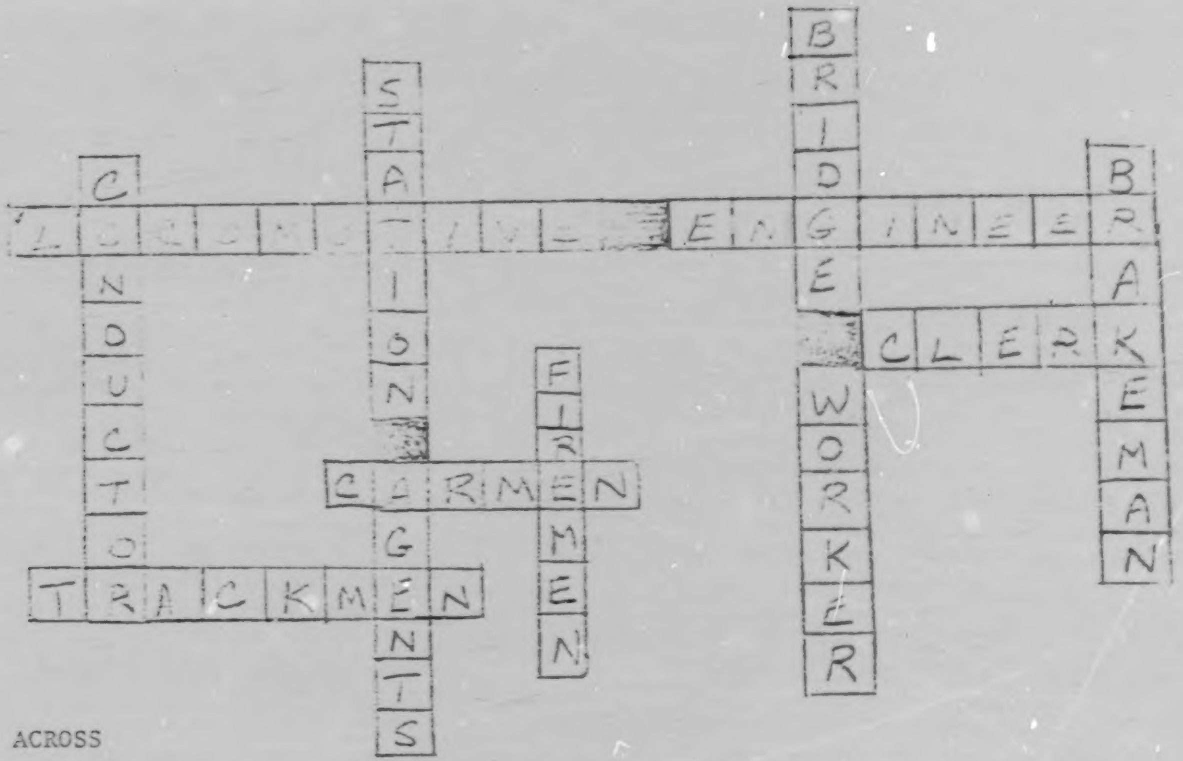
Quote -- Late President J.F.K.

> --"As our frontier moved westward, it was the railroads that bore the great tide of Americans to areas of new opportunities and new hope. It was the railroads that linked together the diverse segments of this vast land so that together they might create the greatest economy the world has known."

First locomotive to run on a standard railroad in the U.S. was the British Built - Stourbridge Lion. On August 8, 1829, the Lion, operated by Horatio Allen, was tried out on a short wooden railroad in Pennsylvania. September, 1829, the Tom Thumb, an experimental locomotive built by Peter Cooper of N.Y. - was American built and ran!
First steam passenger railroad ran in Charleston, S.C. in December, 1830.

*Network of more than 20,000 miles of rail line reaches into all parts of the country. Nations largest employer. Worker starts at the bottom and works his way up.

NAME ______________________________


LOCOMOTIVE ENGINEER
CLERK
CARMEN
TRACKMEN
CONDUCTOR
STATION AGENTS
FIREMEN
BRIDGE WORKER
BRAKEMAN

ACROSS

1. Responsible for running locomotive safely and efficiently
2. Handles paper work and accounts for each piece of merchandise
3. Builds and repairs railroad freight and passenger cars
4. Construct, maintain, and repair tracks

DOWN

5. Responsible for seeing that railroad trains are moved according to train orders
6. Official representative in dealing with public at railroad stations Sells tickets, checks baggage, and loads and unloads freight
7. Checks fuel, electrical equipment and tools before each run in order to insure safety
8. Construct and repair tunnels, bridges, railroad stations owned by the railroad
9. Sees that proper flags, warning lights, and other signals are displayed while train is in motion or stopped. Checks air brakes.

DEVELOPMENTAL VOCATIONAL EDUCATION

Due to the fact that the week is shortened because of the Thanksgiving Holidays, we have planned this lesson as a review -- a fun review. We have not written up specific objectives but have listed the activities. One of the activities might be an introduction to the following lesson on trucks.

Activities	Purpose
1. Riddle Bulletin Board	1. To review shipping and train occupations.
2. Place cards on the backs of the students (volunteers) which would have the name of an occupation. Then have the other members of the class give hints to this student who would then have to guess what job they represented.	2. A review in the area of the train.
3. Pass train booklets out. Let students page through these booklets.	3. A review and an enforcement of the train lesson.
4. Pass out pamphlets on the trucks which were received from White Motors. Allow the children to page these thoroughly giving them an idea and motivation to learn more about trucks.	4. Introduction to truck lesson.
5. Devote extra time to the development of the transportation table presentation. State different names that may be familiar to the children. (Names which correlate to the area/cluster of transportation) -- Cleveland Port, Burke Airport, Hopkins Airport, B & O Railroad, Penn Central, Pacific Central, White Motors, Leese-Neville	5. Learn more about city.

Lesson #6

K-6

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Trucking

Goal: Student should develop an interest in trucking occupations.

Objectives: Student should identify and describe a greater number of occupations in trucking system.

(a) student should identify with areas trucking companies, White Motors
(b) student should describe the following jobs: over the road truck driver, local truck driver, and routeman, bus driver
(c) student should relate to school work and its importance in the working world.

Obj.	Learning Experience	Materials	Evaluation
b	1. Introduction - game Student describe and expresses what the truck is used for.	Paper bag with 4 trucks representing the different jobs.	
a,b,c	2. Film - further explanation of jobs.	"Lifeline on Wheels" White Motors Corp. 431-2000 East 79 St. Mr. G. Garret	
b,c	3. Discuss film - try to relate jobs to truck (toys) -over the road truckdriver -local truckdriver -routeman -bus driver -straight truck - local truckdriver -piggy back truck on trains -weight station - so much weight on an axle aloud to prevent wear on roads -drivers taught safety	Toy trucks Job flash cards	Was student able to relat to film?

Lesson #7

6-8

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Trucking

Goal: Same as lesson #6

Objectives: Same as lesson #6 .

Obj.	Learning Experience	Materials	Evaluation
b,c	1. Define jobs - students draw trucks and name and define jobs.	Mimeographed sheets	Can students jobs by rela to film and cussion from lesson #6?
c	2. Freight form - students will fill it out along with the teacher.	Mimeographed sheets	Is it import to go to sch

B & O RAILROAD
Shipping Division
P.O. Box 5842
Cleveland, Ohio 44119

MEMORANDUM FOR FACTORY SHIPMENTS

Date Shipped__________ Dept. No. ________ Date Entered __________

Order No.____________________ Car No. __________________

Billed to: ____________________________________

Street ____________________________________

City ____________________________________

Shipped to: __________________ __________________

Order No.	Quantity to Ship	Rejection Tag No.	Quantity Shipped	Description	Received

DRIVING OCCUPATIONS

Over the Road Truckdriver -- across the nation
large semi

Local Truckdriver -- state and vicinity

Routemen -- milkman, specific route

Bus driver -- associated with bus lines

Lesson #8

7-8

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Airplanes

Goal: Student should develop an interest in airplane occupations.

Objectives: Student should identify and describe a greater number of occupations in airplanes system.

(a) student should identify with Cleveland Hopkins and Burke Lakefront Airports.
(b) student should describe the following jobs: aircraft mechanic, airplane dispatcher, air traffic controller, teletypist, pilot, copilot, flight engineer, and stewardess
(c) students should recognize the importance of education in obtaining a job.

Obj.	Learning Experience	Materials	Evaluation
a	1. Introduce Cleve. Hopkins Airport (Largest in Cleve.). Can you name another airport in Cleve.? Burke Lakefront.	Picture of Cleve. Hopkins	
b,c	2. Airplane skit which was given out at previous lesson so student would have time to practice it.	Slides on airport shown - correlated with skit	Were student able to carry out task?
b,c	3. Discussion - ask actors to tell about their job	Flash cards	Were students able to defi jobs?
b	4. Culminating activity - game matching	Mimeographed sheets	Did students match jobs correctly?

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Airplanes

Goal: Student should develop an interest in airplane occupations

Objectives: Student should identify and describe a greater number of occupations in airplanes system.

(a) student should identify with Cleveland Hopkins and Burke Lakefront Airports
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(c) students should recognize the importance of education in obtaining a job.

Obj.	Learning Experience	Materials	Evaluation
	1. Before class students in skits prepare and put on articles which represent their jobs	Badge Stripes	
	2. All students grouped together on floor as an audience. -Has anyone been to a play? -Did you play a part at the play even though you were not in the play? *Audience -Is an audience important? -What must they do?		
	3. Introduction to skit-set the scenes (1) classroom (2) airplane - United Airlines -Has anyone flown on a plane? -What airport did you fly from? *Cleveland Hopkins -Is it the biggest in Cleveland? -Does anyone know a smaller airport that is real close to us? *Burke Lakefront		
	4. Skit - Students did not have much time to practice so they will work on expression instead of body movement. Job titles on chalk tray. Students name jobs on chalk tray.	Airplane slides shown correlated to skit. Flash cards	Were students able to carry out task?
	5. Each student receives a skit in order to recall jobs for matching game. (skimming techniques used)	Mimeographed sheets	Could students do the work sheet?

Obj.	Learning Experience	Materials	Evaluation
	6. Students correct sheet with teacher in an overhead presentation.	Transparency	How well did students do?
	7. Discuss what materials are available for them to look at		
	8. Next week we shall have a test so be sure to study.	"Wonderful World of Cleveland"	

PLAY	The Pilot and His Plane
AUTHOR	Jeanann Dzurilla
CHARACTERS	Captain, Co-Pilot, Friend from F.A.A., Flight Engineer, Stewardess, Passengers (two), Little Old Lady and Her Friend, Teletypist, Clerk, Air Traffic Controller, Aircraft Mechanic, Airline Dispatcher, Teacher, Narrator.
PROPS	Modify to own liking

NARRATOR: Here is Captain ________. He is the pilot of a big plane. He is brave. He is careful. Captain __________ wears a blue suit. He has gold stripes on his sleeves. There are wings on his coat. He wears a cap with a badge on it. It took a long time for _________ to become the captain of a big plane. First he had to go to a flying school.

AT SCHOOL

TEACHER: We have learned the importance of the radio and how to use it properly when in flight. (Radio Signal) Yesterday, we talked about weather and the need for the daily forecast. ___________, can you recall any of the traffic rules of the sky?

CAPTAIN: Yes, teacher, we must fly at a certain altitude and a certain speed. Keep on course at all times to avoid collision with another plane.

TEACHER: Very good, _______. We will take our first lesson in the air today. Now we turn the wheel right and the plane goes to the right and then turn the wheel left and the plane goes to the left. Pull the wheel towards you and the nose of the plane goes up, push the wheel away from you and the nose goes down.

CAPTAIN: How about when you want to turn around and what's this pedal for?

TEACHER: To turn the plane around, move the wheel to the left and step on the left pedal or move the wheel right and step on the right pedal. Now one wing tilts up and the other wing tilts down. The plane will turn around.

CAPTAIN: I love to fly the plane. I will learn to control the plane properly and efficiently because I want to be an airplane pilot.

NARRATOR: Then ________ went to see a friend. He was a member of the F.A.A. ___________ explained to his friend what he wanted to be.

CAPTAIN: _________, I am interested in becoming an airplane pilot for a national airline. What needs to be done and what should my qualifications be.

FRIEND: Well, old buddy. The F.A.A. which stands for Federal Aviation Administration has some very strict rules. We develop the safety regulations, inspect and test aircraft facilities, provide ground electronics guidance and we give the test for licensing pilots. But since your my buddy, I'll give you some inside info.
You seem to fit the qualifications. You must be 20-35 yrs. of age. 5 ft. 6 inches to 6 ft. 4 inches, and weigh between 140-210 pounds. You have graduated from high school and you need two years of college. If you have bad vision, you need

1st LITTLE OLD LADY: Hey, sonny, we need two tickets to Miami, Florida. This cold weather in Cleveland is doing nothing for my back aches.

2nd LITTLE OLD LADY: We want to fly the friendly skies. Gertrude, I can hardly wait to relax on the sunny warm beach in Miami. Get a move on there, young man.

CLERK: Reservations, ladies. Fare to Miami - $136.00 plus tax $6.30 which comes to $142.30. Thank you ladies, right down the ramp to Flight 216 for Miami, Florida. We'll take care of your baggage after we weigh it. Here are your tickets, and baggage tags. We are called the traffic agent or clerk. We sell tickets, make reservations, schedules, fare information, check and weigh baggage. We also keep record of passengers and cargo. Flight 216 leaving for Miami, Florida at Gate 23, in 15 minutes. Start boarding the plane.

LITTLE OLD LADIES: He was such a nice man. He was cute, too. Now, Gertrude, stick to your own age. Well, we're on our way.

STEWARDESS: I am a flight attendant and I am aboard almost all passenger planes operated by the commercial airlines. We greet the passengers as they board the plane and check their tickets, assist them to their seats, hang their coats, and generally make them comfortable. Since we come in contact with the public, we must be poised, tactful and resourceful in case of emergencies. There are age limits. We must be 19-27 years old. Our height must be at least 5 ft. 2 inches and at the most 5 ft. 9 inches. We must be in excellent health. We can serve meals and give safety instructions. We are responsible to the captain. Good afternoon, ladies. May I see your tickets? Seats 16 and 17. Right this way, please. May I have your coats? Would you like a pillow?

LITTLE OLD LADY: Where do I sit? How are the weather conditions down in Florida?

STEWARDESS: I will get that information for you immediately.
Captain, how is the weather in Miami?

NARRATOR: For this information, the Captain contacts the Radio Room.

CAPTAIN: Radio Room, come in, Radio Room. Flight 216 needs weather report.

TELETYPIST: Flight 216 for Florida. Weather conditions are fair. Thunderstorm in the southern part of Ohio and northern part of Tennessee. Land in Atlanta, Georgia at 1100 to pick up shipment and continue on to Florida. Weather is good in Florida. Sunny skies at 84 degrees.

CAPTAIN: Get me the Control Tower.

TELETYPIST: Right away, Captain. The Control Tower is directly above us. I am called a teletypist and I work in the Radio Room. I report the weather conditions and other flight information between ground personnel and flight personne I use a radio-telephone. I also operate a teletype machine which has a keyboard similar to that of a typewriter.

it to be corrected to 20/20 vision. You cannot have any outstanding physical handicaps and we will give you a test to see if you have quick reflexes. You also need much experience in the air. I recommend you get a job at a small airport and work your way up.

CAPTAIN: Thanks, alot. I'll take your advice.

NARRATOR: ________ studied and practiced every day until he was ready to get a job as a pilot. There are many kinds of pilots. First ______ got a job as a flying forest ranger. If he saw smoke he called the ranger station on his radio. Next he flew a freight plane. He flew a giraffe from New York to a zoo in Cleveland. He flew fresh fish from Maine to Cleveland.

CAPTAIN: I want to fly a plane with people on it. I will get a job flying a small passenger plane.

NARRATOR: ______ flew a small plane for a long time. He studied more and more and again he had to pass tests to reach his goal of becoming a pilot for a airline.

CAPTAIN: I have studied hard and long and have become a co-pilot at the United Airlines. I sit next to the captain or pilot of the plane. I watch to see how the plane is flying. I am second in command. I assist the pilot in air-to-ground communications, monitoring flight and engine instruments and in operating the controls of the plane. Together, the pilot and I, the co-pilot, plot the course to be flown and compute the flying time between various points. We must also contact the airline dispatcher to check with his figures.

NARRATOR: Then one day ________ got good news.

CAPTAIN: I have finally made pilot. I am now a Captain and am in complete charge of the plane. I now have a co-pilot to help me.

CO-PILOT: I have taken over the duties that __________ once had. We sit in the cockpit. There is also another person up front with us. He is a man directly under me who does some very important jobs. He is called the flight engineer. Please, report the condition of the plane.

FLIGHT ENGINEER: I check the fuel tanks, and inspected the tires. Everything seems to be A-OK. Once the airplane is airborne or in flight, I watch and operate many instruments and devices to check the performance of the engines. I had much schooling also. 3 long years of work experience in the maintenance, repair and over haul of aircraft and engines including a minimum of 6 months training or a year of experience on 4-engine pistons and jet planes. But it all paid off because I love what I am doing. I also check the air-conditioning, pressure and electrical systems.
Condition of plane is tip-top. Ready for take-off.

CAPTAIN: Stewardess, will you please welcome the passengers.

NARRATOR: Back at the airline terminal, the passengers are buying their tickets.

AIR TRAFFIC CONTROLLER: Control tower, come in, Flight 216. Take course as planned. You may have a slight delay when you hit the thunderstorm but it shouldn't give you too much trouble. Fly at an altitude of 3200 ft. This will carry you above major air currents that may give disturbance. Your speed should be the regulation air speed. Over and Out.
I am called the air traffic controller. I am the guardian of the airways and give instructions, advice, and information to pilots by radio and radar to avoid collisions and minimize delays as aircraft fly between airports. We must consider many factors, including weather, geography, amount of traffic, and size, speed and operating characteristics of aircraft. I am stationed in the airport control tower.

CO-PILOT: Co-pilot to airline mechanic. How are the mechanical operations.

AIRCRAFT MECHANIC: Co-pilot, I have checked the propeller conditions which are in fine shape. The damage that was done in the flight yesterday is fixed and in good conditions. I keep the airplanes operating safely and efficiently. I specialize in a specific part of the plane, that is the propellers. They called me here today because of the propeller trouble they had yesterday. Other Aircraft mechanics may specialize on the landing gear, hydraulic equipment, airborne electronic communications. These are then inspected by the F.A.A. men.
Everything is up to standards and take-off can be on time.

CO-PILOT: Captain, did you check with the dispatcher in the pre-flight planning. Is everything going to go as planned.

CAPTAIN: Yes, but I would like to speak with him once again before take-off. Please contact him for me.

CO-PILOT: Radio Room, Flight 216 to Radio Room.

TELETYPIST: Radio Room

CO-PILOT: Contact me with ______________ the airline dispatcher for our flight.

TELETYPIST: Will do.

AIRLINE DISPATCHER: Airline dispatcher here reporting to Flight 216.

CO-PILOT: Contact has been made, Captain

CAPTAIN: Give report on our pre-flight plan once again.

AIRLINE DISPATCHER: You will fly on route 106AB at the altitude of 3200 ft. The total flying time should be 3 hrs. and 43 mins. Your arrival at Atlanta, Georgia, will be at 0245 hrs. You will need no refueling and departure from Atlanta at 0300 hrs. Landing at Atlanta on the far Northwest Air strip. Landing at Miami, Florida at 0335 hrs. on Southern Runway.
I am called the airline dispatcher. I coordinate flight schedules and operations within an assigned area. All F.A.A. rules and regulations are observed. I assist the pilot in pre-flight planning about the quantity of fuel, the best route and altitude, the total flying time and alternate fields for landing if the one planned is hazardous.

STEWARDESS: Weather conditions at Miami, Florida are good, sunny, warm at 84 degrees. Please fasten seatbelts and no smoking till we have leveled-off. Arrival in Miami at 3:35. We hope you enjoy your flight.

NARRATOR: They finally arrive in Florida.

TWO LITTLE OLD LADIES: Well, Certrude, let's get a move on.

CAPTAIN: We hope you have had an enjoyable trip on our flight. Be careful as you leave. Be sure to fly United again --- the friendly skies airline.

DEVELOPMENTAL VOCATIONAL EDUCATION

NAME (Teacher's Copy)

AIRPLANE OCCUPATIONS

COPILOT

TELETYPISTS

AIRCRAFT MECHANIC

FLIGHT ENGINEERS

AIRLINE DISPATCHER

PILOT

AIR TRAFFIC CONTROLLERS

STEWARDESSES

1. keep airplanes operating safely and efficiently
2. plan the flight schedules and operations, quantity of fuel, the best route, the total flying time
3. are the guardians of the airways, giving instructions, advice to avoid collisions
4. are stationed in the radio room and report the weather conditions between the ground personnel and flight personnel
5. is called the captain
6. is second in command and assists the captain
7. check the fuel tanks, inspects the tires, checks performance of engines while in flight
8. is the flight attendant aboard most passenger planes and makes the passengers as comfortable as possible

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Review

Goal: Student should express interest in transportation occupations and enjoy field trip.

Objectives: Students should review transportation occupations by relating to objects viewed.

Obj.	Learning Experiences	Materials	Evaluation
	1. Introduction to field trip given in previous lesson. General information on how to act.		
	2. Field trip - Auto-Aviation Museum - Western Reserve Historical Society 10825 East Blvd. 721-5622	Bus approved Christmas songs to sing on bus	
	3. Preparation for panel discussion or Post Test.		Could students relate what they saw to their panel discussion?
	4. Discuss field trip during return trip on the bus.		

Lesson #10
Grade 5

DEVELOPMENTAL VOCATIONAL EDUCATIONAL PROGRAM

Title: Panel discussion - Review: Correlation of Career education and social studies.

Goal: Student should develop an interest in the occupations of transportation

Objectives: Student should identify and describe a greater number of occupations in the cluster of transportation.

(a) student should identify the occupations in shipping, railroads, road travel, and air travel in early times.
(b) student should identify the occupations in the transportation cluster with modern times and compare to early times.
(c) student should identify types of cargo carried on different types of transportation, early and modern.

Obj.	Learning Experience	Materials	Evaluation
a,c	1. Groups discuss travel made in early times and the type of transportation used.	Map Pictures Textbook	Were the students able to identify their study of occupations in the areas of transpo tion with early times?
a,c	2. Groups discuss jobs that were needed on these types of transportation.		
b	1. Identify modern transportation 2. Compare times	Pictures from handouts in career ed. classes Magazine pictures	Were the students able to identify more jobs in moder times?
a,b,c	1. Children at desks write down important facts, in comparing early times to modern.	Mimeographed sheet (sample below)	Were the students able to compare th early times to modern?

Outline -- Early Times Versus Modern

Early Times	Modern
1. Types of transportation	Types of transportation
2. Occupations	Occupations
3. Types of cargo	Types of Cargo

Lesson #10
Grade 6

DEVELOPMENTAL VOCATIONAL EDUCATIONAL PROGRAM

Title: Panel discussion - Review: Correlation of career education and social studies.

Goal: Student should develop an interest in the occupations of transportation.

Objectives: Student should identify and describe a greater number of occupations in the cluster of transportation.

(a) student should identify the occupations in shipping, railroads, road, air travel in the countries they are studying.
(b) student should identify types of cargo transported in the different countries.

Obj.	Learning Experience	Materials	Evaluation
a	1. Children form groups and choose the countries they are interested in.	Maps Pictures Pictures from handouts given in career ed. class Textbook Mimeographed sheet (below)	1. Were the students able to identify their study of occupations with the occupations in transportation used by other countries 2. Were the students able to identify the types of cargo needed from different countries
a	2. Children discuss the types of transportation used in that country.		
a	3. Children discuss the types of occupations in the country.		
b.	4. Children discuss types of cargo from the countries.		
a,b	5. Children at desk, take notes on the discussion held by panel.		

OUTLINE -- Occupations in transportation used by other countries

Country	Types of Transportation	Occupations	Cargo

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Transportation -- Post-Test

Goal: Student should develop a greater interest in transportation occupations.

Objectives: Student should express the knowledge obtained from the previous lessons.

Obj.	Learning Experience	Materials	Evaluation
	1. Quick review	Riddle board	
	2. Post-Test	Mimeographed sheets	Has the student's knowledge increase in the area of transportation occupations?

DEVELOPMENTAL VOCATIONAL EDUCATION NAME ____________________

POST TEST ON TRANSPORTATION DATE ____________________

PART I - ESSAY

1. What is transportation? ____

____

2. What are the four areas of transportation we discussed?

____________ ____________ ____________ ____________

PART II - MATCHING

____Longshoreman

____Shipping Clerk

____Cleveland Port

____Engineer

____Pilot

A. keeps records of goods unloaded and loaded on the ships

B. responsible for operation and maintenance of the ship

C. loads and unloads cargo

D. Ships from all over the world dock at this port

E. navigates the ship

PART III - FILL-IN

(Brakeman, Conductor, Trackman, Station Agent)

1. The ____________ makes sure the trains move on time.

2. Selling tickets and checking baggage is the job of the ________________.

3. The ______________ checks air brakes and gives signals.

4. Maintenance, repairs, and construction of tracks, ties, switches, and fences is the job of the ______________.

PART IV - TRUE OR FALSE

1. __________ The local truck driver works from a warehouse and receives daily assignments.

2. __________ The over-the-road driver stops at his daily route in the same city.

3. __________ The local driver delivers people from place to place.

PART V - MATCHING

_____ Flight Engineer

_____ Air Traffic Controller

_____ Airline Dispatcher

_____ Stewardess

A. plans flight schedules and operations, quantity of fuel, and best flying route.
B. Makes passengers comfortable
C. checks fuel tanks, inspects the tires, and checks performance of engines while in flight
D. guardians of airways, gives advice to avoid collisions.

EXTRA***

The largest airport in Cleveland is the ________________________________.

MERRY CHRISTMAS!!!!

DEVELOPMENTAL VOCATIONAL EDUCATION

Title: Public Services

Goal: Students should develop an interest in Public Service Occupations

Objectives: Students should identify and describe a greater number of Public Services

(a) students should recognize the need and importance of public servants.
(b) student should exhibit present knowledge of occupations and safety procedures correlating to public service, police and fire.
(c) student should identify the following occupations in public services of police and fire: detective, car patrol, motorcyclist, communicator, dispatcher, first aid, firefighter.
(d) student should become acquainted with postal jobs in the cluster of public services.

Obj.	Learning Experience	Materials	Evaluation
b	1. Pre-test (Public Service & Health)	Mimeographed sheet	Were the students able to answer some of the questions?
a,b	2. Problem-Solving Situation given to students orally. Discuss safety procedures to take and who to contact. Students given cards at board to place in proper order.	(Attached sheet) Cards scrambled at board	Were the students able to exhibit knowledge of safety procedures and recognize need of public servant?
a,b,c	3. Show slides and discuss. Police: What other types of policemen are we familiar with? mounted police, dog wardens. Compare police dispatcher with airline dispatcher. Both coordinate schedules to be taken that day. Fire - stress importance of teamwork. Stress equipment used in slides. Have a student place the correct name of the occupation on board from scrambled cards.	Slides on Public Services and 3M machine	Were the students able to identify the occupations before hearing the sound recorded about the job?
a,b,c	4. Have students write their own experience involving either the police or fire. Ask them to use the proper name for the occupation, what equipment they may have seen them use, and what they saw happen.	Paper and pencil	Were the students able to identify the occupation correctly?

Obj.	Learning Experience	Materials	Evaluation
	5. Ask students how they would address a letter. Ask the importance of the zip code. Show the slides about postal jobs and discuss.		Through discussio were the students able to identify some postal jobs?

Library Book -- What Policemen Do

PROBLEM:

Johnny is (the same age as the class; ex. 12 yrs. old.) He is home from school for X-mas vacation. He has a baby sister about 2 yrs. old. Johnny's mother is baking X-mas cookies but she has to go to the grocery store to buy more ingredients to finish baking. She leaves Johnny alone to watch his baby sister since she would only be gone a short while. Johnny takes his little sister into the living room to watch television with him. Johnny's favorite program was on (here mention a favorite of the children). Johnny became so involved in the television program that he did not see his baby sister crawling away toward the kitchen where she smelled the cookies. She crawled over to the stove and started playing with the nobs. Somehow the high flames from the burners caught a dish towel which was lying on the stove. The fire grew and the cupboards started to burn. The baby became frightened and began to cry. Johnny came running into the kitchen and saw that the fire was too high for him to put it out himself. What should Johnny do?

Detective -- college 2 yrs. and 4 yrs. of law school training.

Guards -- high school graduates

Policemen -- personal characteristics; honest, good judgement, and sense of responsibility

Firefighters -- strength, medical examination

DEVELOPMENTAL VOCATIONAL EDUCATION

PRE-TEST: PUBLIC SERVICES AND HEALTH

NAME ____________________ ____________________ DATE ____________________

A. Public Services - Fill-in

1. Name 3 different jobs in the Police Department plainclothesmen, patrolmen, motorcycle, dispatcher
2. Where is the main police station located? E. 21st and Paine Ave.
3. What telephone number would you call to contact the police? 621-1234
4. Why is it important to use the zip code number? faster and more efficient

B. Yes or No

1. Yes When a policeman is off duty, is he expected to exercise his authority?
2. Yes Firemen sometimes give first aid.
3. No The number to call in case of fire is 621-1266
4. Yes Firefighting requires teamwork.

C. Health - Fill-in

1. Name a hospital in Cleveland St. Vincent Charity; Mount Sinai
2. Is it important to get a yearly check-up? Yes, prevents illness

D. Choose one to fill in the bottom

X-Ray Technician

Pharmacist

Dietician

Physical Therapist

Medical Secretary

1. Dietician plans the diets and foods each person eats in the hospital.
2. Pharmacist works at a drug store and fills prescriptions.
3. Filing and keeping records in order is the job of the Medical Secretary.
4. X-Ray Technician takes pictures of the inside of the body
5. Physical Therapist helps people to move their muscles, bones and nerves properly again.

E. True and False

1. Electricity operates your telephone. True

2. The cable splicer completes the connection after the lineman places the cable on the poles. True

3. The telephone operator installs, tests, and maintains meters. False

Lesson #13

K-8

Title: Public Services -- Telephone

Goal: Students should develop interest in telephone occupations

Objectives: Student should identify and describe a greater number of occupations in the telephone industry.

(a) students should recognize the need and importance of the telephone

(b) students should identify the types of communication used in the past.

(c) students should identify the following jobs in the telephone industry: telephone operator, linemen, cable splicer, installer and repairman.

(d) students should demonstrate proper use of telephone and telephone directory.

Obj.	Learning Experience	Materials	Evaluation
a,b	1. Students discuss types of communications used in the past. Indians - smoke Africans - drum Pilgrims - horse, walking, pigeons, mirrors What types do we have today? Telegraph, T.V., radio, Telephone		Were the students able to recall from their history study?
a	2. Who invented the telephone - Bell - 1875 Who uses the telephone? Everyone What are its uses? Business, Emergency How would it be if there were no telephones? Slower Communication, less jobs. How does the telephone work? Electricity Direct student attention to one of the charts	Display 3 charts	Were the students able to recognize need and importance of the telephone?
c	3. Have students discuss the building of the telephone company. What is needed? lines, linemen, connections, cable splicer, phones, installer, repairmen, operator, telephone operator Fact: More than 1/2 of telephone workers are women	Yellow cards on board	Were the students able to identify telephone jobs?

Obj	Learning Experience	Materials	Evaluation
d	4. Have a student describe the telephone Letters and numbers a. where to find number - directory-alpha. order b. listen for dial tone c. how to dial-finger to the stop d. describe busy signal e. what to say in case of wrong number f. 10 rings for someone to answer g. how to hold receiver h. what to say in case of emergency	Teletrainer used 2 students demonstrate telephone directory	Were the students able to demonstrat proper use of telephones?
c	5. Homework sheets handed out. Decode sentences.	Chart 2 used Mimeographed sheets	

Lineman -- sets up cables on poles, places wires and cables leading from the central office to customer's house
-- high school grad.; knowledge of basic principles of electricity and electronics; good physical condition.

Cable splicer -- splices and maintains telephone wires and cables, completes the line connections.
-- high school grad.; basic principles of electricity.

Installer and Repairman -- maintain telephones, places telephones in homes, and buildings, also repairs them.

Telephone Operator -- assists customers in specialized services such as long distance, emergencies, information.

Attention Detectives: Decode these secret messages.
These sentences follow a certain code. Figure out the code and decode the sentences to find out about public service occupations

1. 20-17-8-21-20-17-19-18-6-21-8-7 must have some knowledge of 20-17-8-21-7 and 20-17-8-7-6-25-17-22 (Firefighters -- fires -- first aid)

2. There are many types of policemen: 23-25-8/10-25-6-8-11-14, 13-11-5-12-6-21-22/ 10-11-14-11-23-21, 7-21-23-15-8-17-6-1/19-5-25-8-22-7, 23-11-25-7-6/19-5-25-8-22-7, 13-11-7-11-8-23-1-23-14-21, and 18-21-14-17-23-11-10-6-21-8/10-25-6-8-11-14-7. (Car patrol -- mounted police -- security guards -- coast guards -- motorcycle -- helicopter patrols.)

3. 22-21-6-21-23-16-17-4-21-7 are also called 10-14-25-17-12-23-14-11-6-18-21-7-13-21-12. (Detectives -- plainclothesmen)

4. 22-21-6-21-23-6-17-4-21-7/13-5-7-6/19-11/6-11/7-23-18-11-11-14/20-11-8/6-3-11/ 1-8-7/25-12-22/6-18-21-12/6-11/14-25-3/7-23-18-11-11-14/20-11-8/20-11-5-8/1-8-7/. (Detectives must go to school for two years and then to law school for four yrs.)

5. 20-17-8-21-20-17-19-18-6-21-8-7/8-21-9-5-17-8-21-7/6-21-25-13-3-11-8-15/ (Firefighters requires teamwork.)

TRY THESE:

1. 1a/3b-2b-12a-9a-3a-5a/2b-6a-6a-9a-3a-5a-5b/13a-8b-6b-7b/2a-5a/3a-2b-8b-5b-1a-7a-5a-2b-8b-6b/3b-1a-7b-9a-5a-1b-7b/1a-1b-4a/8a-2b-1b-5a-6b-7b. (A police officer must be courageous,patient, and honest.)

2. The 12a-9a-1b-5a-13a-5a-1b places the 10b-9a-5b-5a-6b and 3a-1a-2a-12a-5a-6b/ 12a-5a-1a-4a-9a-1b-7a/6a-5b-2b-13a/7b-8a-5a/3a-5a-1b-7b-5b-1a-12a/ 2b-6a-6a-9a-3a-5a/7b-2b/7b-8a-5a/3a-8b-6b-7b-2b-13a-5a-5b-6b/8a-2b-8b-6b-5a/. (Linemen -- wires -- cables leading from the central office to the customers house).

3. The 7b-5a-12a-5a-3b-8a-2b-1b-5a/2b-3b-5a-5b-1a-7b-2b-5b/1a-6b-6b-9a-6b-7b-6b/ the 3a-8b-6b-7b-2b-13a-5a-5b-6b. (Telephone operator assists customers).

4. The 3a-1a-2a-12a-5a/6b-12a-9a-3a-5a-5b/ completes the 3a-2b-1b-1b-5a-3a-7b-9a-2b-1b of the 12a-9a-1b-5a. (Cable splicer -- connection -- line).

5. The 9a-1b-6b-7b-1a-12a-12a-5a-5b places the 7b-5a-12a-5a-3b-8a-2b-1b-5a/ 9a-1b/8a-2b-13a-5a-6b/1a-1b-4a/2a-8b-9a-12a-4a-9a-1b-7a-6b. (Installer -- telephone in homes and buildings).

HINTS: (1) There are 26 letters in the alphabet.

(2) The alphabet divides into two equally

CODES

Part I

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Part II

1 2 3 4 5 6 7 8 9 10 11 12 13

a] A B C D E F G H I J K L M

b] N O P Q R S T U V W X Y Z

COPY

St. Francis School
7305 Myron Avenue
Cleveland, Ohio 44103
Jan. 15, 1973

Cleveland Fire Department
Headquarters Office
330 St. Clair, N.W.
Cleveland, Ohio
(621-1223)
Public Relations

Dear Lieutenant Morgan,

This is a letter confirming our agreement for you to speak at St. Francis School. The date scheduled is January 29 at 1:00 P.M.

The class of 5th and 6th graders will consist of 55 students. They are eagerly awaiting your visit.

The contact person is Jane Ozello. If there is any change in plans please contact her at 361-4858.

We will see you then.

Sincerely,

Principal of St. Francis School

Developmental Vocational Education Program

Lesson #14

Speakers to come to St. Francis and Immaculate Conception

St. Francis: Lt. Morgan of the Fire Dept.
Explanation of his job and some of his equipment -- oxygen tanks

Immaculate Conception: Officer Kaitsburg of the Police Dept.
2 day seminar with grades 5 and 6 discussing several aspects of the police departments -- juvenile codes, police occupations, description of equipment, procedures and regulations to follow.

Lesson #14
Public Services
4-8

Title: Public Services -- Gas and Water

Goal: Student should develop interest in occupations of the gas and water companies.

Objectives: Student should identify and describe a greater number of occupations in the areas of gas and water.

(a) student should recognize the need and importance of the gas and water companies.
(b) student should identify the process of transporting water and gas from its natural place to our homes
(c) student should identify the following jobs: chemist, stationary engineer, meter reader, mining engineer, construction laborer, geologist.

Obj.	Learning Experience	Materials	Evaluation
a,b	1. Students describe water sources. Why is it important to have water - its uses? How do we get it to our homes?	Map of U.S.	Were the students able to recognize the need of water companies?
a,c	2. Demonstrate an experiment. Ex. Compare two glasses of water dirty and clean. Discuss with the students. Which would you rather drink? Who might purify it? Chemist.	2 glasses of water	
c	3. Students describe a picture of a water plant, equipment? Who operates the equipment? Stationary engineer. How does the water co. know how much water we use? meter reader	Picture Representation of a meter	Were the students able to describe transport of water and identify the jobs?
a,b,c	4. Water is a resource. What other natural resource do we need and use? How do we use it? How does it get to our houses? Have students look at map to see if they can find any gas centers as they did with the water. Describe jobs. Need for construction laborer, mining engineer, geologist. How do we know the amt. we use? meterman.	Map Representation of a gas meter	Were the students able to recognize need of gas company and identify gas jobs?
c	Students divided into two - review through a game of tic-tac-toe.		Were the students able to identify the occupations?

PUBLIC SERVICE -- GAS AND WATER

Chemist -- study composition and chemical properties of substances and processes of chemical change. Test, purifies, water. College: degree of BS or Ph.D.

Stationary Engineer -- operates, maintains, and repairs stationary engines, furnaces, generators, turbines and other equipment; regulates power and controls. Water given to homes.

Water man -- house to house meter reading

Geologist -- examines rocks, search for natural resources.

Mining engineer -- find and extract minerals from the earth. Design the layouts of mines, supervise the construction of mine shafts and tunnels in underground operations. Also makes sure of efficient operation of the tunnels - ventilation, water supply, power, communication.

Construction Laborer -- loading and unloading of construction materials at the worksite and the shoveling and grading of earth. Stack and carries equipment. Good physical condition.

Gas man -- house to house meter reading

Tic-Tac-Toe:

Direct questions to the students concerning gas and water companies and occupations. Have them spell the occupations. If correct answer and correct spelling, get to place X or O in proper place.

DEVELOPMENTAL VOCATIONAL EDUCATION

VOCABULARY

transportation

pilot or captain
deck hand
engineer
shipping clerk
mate
longshoreman
galley
bulk cargo
tug boat
custom officer

trackmen
locomotive engineer
brakeman
conductor
station agent
carman
fireman
bridge workers

Over-the-Road truckdriver
Local
Routeman
Bus Driver

aircraft mechanic
airline dispatcher
air traffic controller
teletypist
pilot
co-pilot
flight engineer
stewardess

detective
car patrol
motorcyclist
communicator
disptacher
first aid
firefighter
mounted police
Coast Guard
Helicopter Patrol

electricity

telephone operator
lineman
cable splicer
installer and repairman

doctor
nurse
X-ray technician
dietician
medical records secretary
medical librarian
physical therapist
pharmacist
dentist

Lesson #15

4-8

Title: Health

Goal: Students should develop an interest in Health Occupations

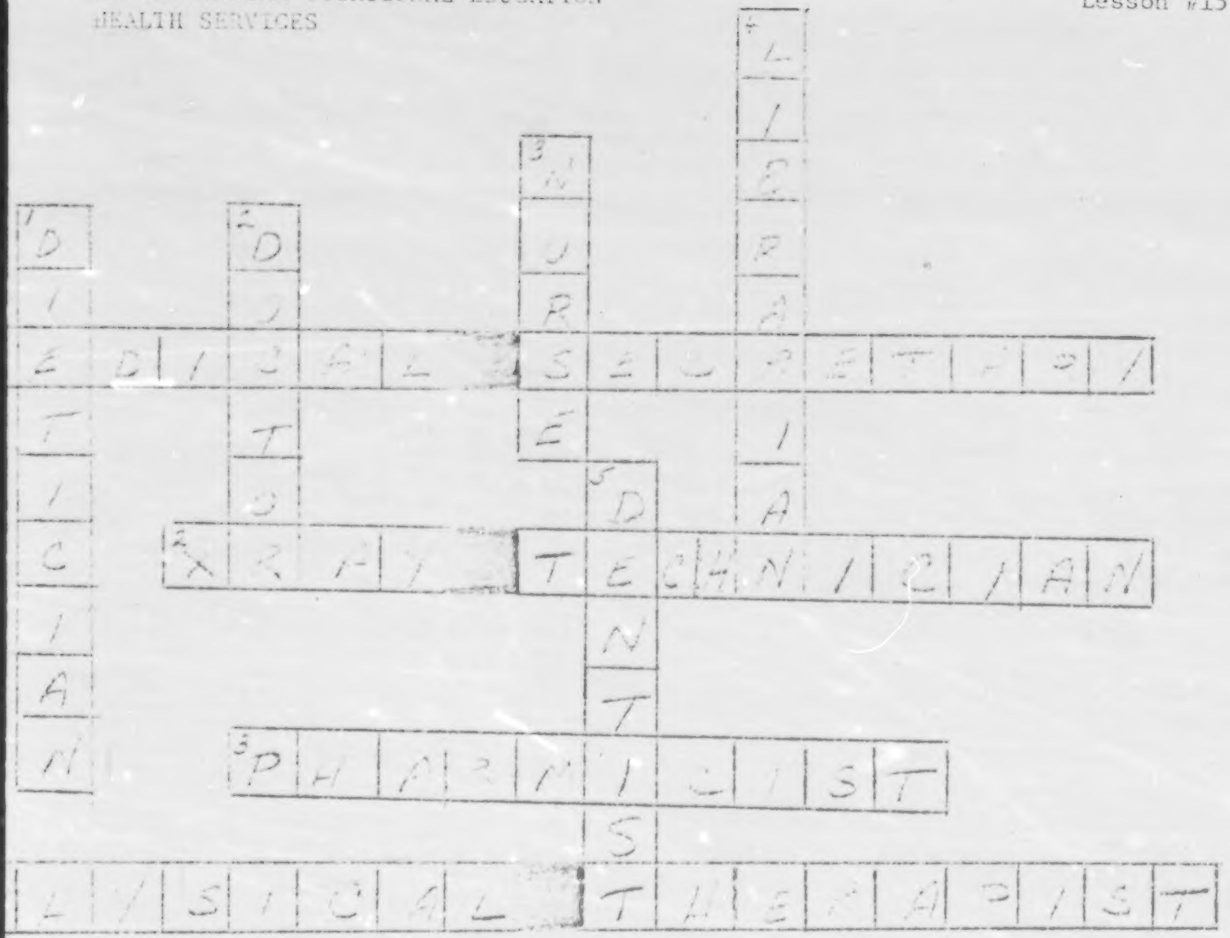
Objectives: Students should identify and describe a greater number of Health occupations.

(a) student should exhibit present knowledge of health occupations
(b) student should recognize the importance of health careers.
(c) student should identify the following jobs: doctor, nurse, X-ray technician, dietician, medical records secretary, librarian, physical therapist, pharmacist, dentist.

Obj.	Learning Experience	Materials	Evaluation
a.b	1. Recall situation of Johnny and baby sister, Mary. What would student do in situation where Mary was burned? Discuss nearest hospital, and others in area. What kind of people might we see there?		Were the students able to identify some health occupations? Were the students able to recognize their need?
c	2. Film "Health Careers"	Film	
c	3. Discuss new occupations met in the film. Display objects and have students relate them to the occupations	X-ray, Medical book, stethoscope	Were the students able to relate objects or pictures to the occupation?
c	4. Word scramble on board. This could be incorporated with above #3.		

Health:

Different educational backgrounds
One depends upon the other
There is a need for more people in the health field
Dedication is needed
Health occupations require certain abilities in people.


1 DIETICIAN
2 DOCTOR
3 NURSE
4 LIBRARIAN
5 DENTIST
EDICAL SECRETARY
2 X-RAY TECHNICIAN
3 PHARMACIST
LYSICAL THERAPIST

ACROSS:

1. greets patients, makes appointments, types, and files reports.
2. takes pictures of the inside of the body.
3. has a license which allows him to fill prescriptions.
4. helps people to move their muscles and bones properly again.

DOWN:

1. plans and prepares the diets of each patient in the hospital.
2. examines patients when ill and performs operations.
3. provides patients with nursing care.
4. files patient records so the doctors can examine them.
5. checks our teeth and gums.

NAME ______________________________

DEVELOPMENTAL VOCATIONAL EDUCATION

PRE-TEST
PUBLIC SERVICES AND HEALTH

NAME ______________________ DATE ______________

A. Public Services - Fill-In

1. Name 3 different jobs in the Police Department? dispatcher, motorcyclist, security guard, car patrol, communicator

2. Where is the main police station located? E. 21st and Payne

3. What telephone number would you call to contact the police? 621-1234

4. Why is it important to use the zip code number? faster and more efficient

B. Yes or No

1. Yes When a policeman is off duty, is he expected to exercise his authority?

2. Yes Firemen sometimes give first aid.

3. No The number to call in case of fire is 621-1266.

4. Yes Firefighting requires teamwork.

C. Health - Fill-In

1. Name a hospital in Cleveland. St. Vincent Charity, Mount Sinai

2. Is it important to get a yearly check-up? yes

D. Choose one to fill in the bottom

X-Ray Technician Physical Therapist

Pharmacist Medical Secretary

Dietician

1. Dietician plans the diets and foods each person eats in the hospital.

2. Pharmacist works at a drug store and fills prescriptions.

3. Filing and keeping records in order is the job of the Medical Secretary

4. X-ray Technician takes pictures of the inside of the body.

5. Physical Therapist helps people to move their muscles, bones and nerves properly again.

E. True and False

1. Electricity operates your telephone. True

2. The cable splicer completes the connection after the lineman places the cable on the poles. True

3. The telephone operator installs, tests and maintains meters. False

Title: Construction

Goal: Students should develop an interest in construction occupations

Objectives: Students should identify and describe a greater number of construction occupations.

(a) student should exhibit present knowledge of construction occupations
(b) student should recognize importance of construction workers
(c) student should identify the following jobs and their equipment: bricklayer, carpenter, electrician, painter, plasterer, plumber, cement mason, foreman.

Obj.	Learning Experience	Materials	Evaluation
a	1. Students view pictures of construction workers and discuss the pictures. When a certain job is described, that card is placed on the board.	Pictures Cards	Were the student able to relate w picture and identi occupation?
b,c	2. View blue-print. Have students describe the blue-print. What does each page describe? Job of the foreman. 1st page - foundation - bricklayer 2nd page - walls - carpenter plumber electrician 3rd page - 2nd floor - plasterer, painter cement mason	Blue-print	Were the student able to describe how to build a hou and what occupatio would be needed?
b,c	3. View slides, discuss tools used by workers	Slides	Were the students able to identify the tools of eac worker?
b,c	4. Have students look at house made out of construction paper on the board. Have volunteer describe how it was made.	Construction paper house	Were the students able to identify the occupations?
c	5. Have 2 volunteers put the cards that were on the board in order Game, Foreman, Bricklayer, Carpenter, Electrician Plumber, Plasterer, Painter, Cement Mason		

3 Types of Construction

(1) electrical and plumbing
(2) residential, commercial, and industrial
(3) dams, bridges, roads

Occupations:

Bricklayer -- constructs and repairs structures such as walls, fireplaces, and partitions using brick tiles or terra cotta (red-brown clay).
Tools -- trowel, brick hammer, and jointer.

Carpenter -- erects wooden framework, installs doors, floors, and wooden trim.
High school and 4 year apprenticeship.

Cement Mason -- concrete fixing, buildings, sidewalks.

Electrician -- installs wiring, fixtures, and electrical equipment.
Basic math, high school and 4 year apprenticeship.

Foreman -- directs other workers, looks at blueprints.

Painters -- use spray gun or brush to apply paint.
no schooling, good eyesight, must stand paint fumes.

Plumber and Pipefitter -- installs, alters and repairs pipe systems that carry water, gas, waste matter.
Tools -- wrenches, hand tools

Plasterer -- several coats of plaster to unfinished walls and ceilings with trowel.
High school and 4 years.

Title: Apparel Industry

Goal: Students should develop an interest in Apparel Occupations

Objectives: Students should identify and describe a greater number of Apparel Occupations

(a) students should exhibit present knowledge of Apparel Occupations
(b) student should recognize importance of Apparel Industry
(c) student should identify the following jobs: designers, pattern makers, markers, cutters, sewing machine operators, hand sewers, alteration, pressers, tailors, inspectors.
(d) student should identify some types of materials

Obj.	Learning Experience	Materials	Evaluation
a	1. Discuss with the students any type of sewing done in their own homes. Let them describe the way it was done, how, and what was needed. (knitting, crochet)	Bring in types of needles	Were the students able to identify any types of sewing?
d	2. Have volunteers feel and describe materials to class.	Bag full of different materials	Were the students able to describe - Identify differen types of materials?
c	3. Show pattern. Place pattern on board and have volunteer draw the piece. Do several pieces and show how they fit together. Discuss importance of industry. (faster, cheaper) Have students name industries in the area.	Pattern	Were the students able to recogniz the need and impor-tance of Apparel Industry?
c	4. Have students decide which was needed first - design, pattern, marker, cutter, sewing machine, hand sewer, alterations, presser, tailor, inspector. Pass out cards and have them place them in order on the board	Cards	Were the student able to identify the jobs?
b,c	5. Show slides and discuss what is being done in each.	Slides	Were the student able to identify occupations and importance of th in the industry?
c	6. Matching exercise.	Mimeographed sheets	Were the students able to identify jobs?

NAME Teacher's Copy

CONSTRUCTION AND APPAREL INDUSTRY

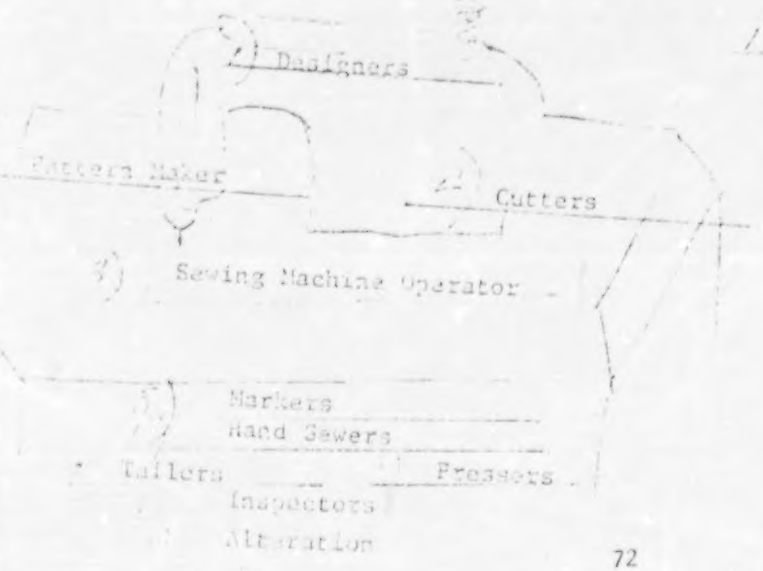
STUDY SHEET

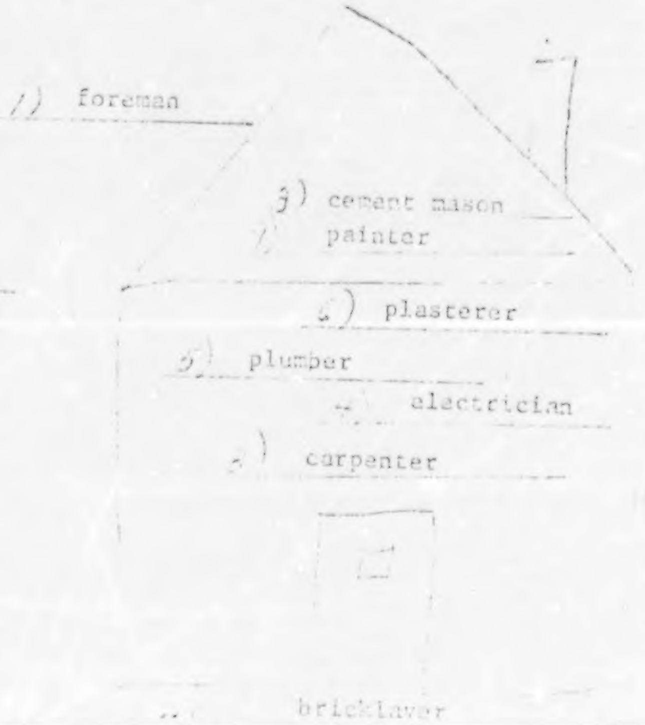
1. Designers
2. Pattern Makers
3. Markers
4. Electrician
5. Plumber
6. Plasterer
7. Foreman
8. Cutters
9. Sewing Machine Operators
10. Hand Sewers
11. Cement Mason
12. Painter
13. Carpenter
14. Bricklayer
15. Alteration (Bushelman)
16. Pressers
17. Tailors
18. Inspectors

MATCH THE WORD WITH ITS DEFINITION

a. 1 creates original designs for new clothes.
b. 3 trace the pattern pieces on large sheets of paper.
c. 2 constructs a full-size master pattern.
d. 10 use needle and thread to do simple sewing or stitching.
e. 12 a man who paints your house.
f. 13 a person who makes things of wood.
g. 7 a person who directs all workers on the construction area.
h. . 8 cuts out various garment pieces from layers of cloth.
i. 14 a person who lays bricks.
j. 5 a man who fixes sinks and faucets.
k. 4 a man who installs wires so we may have lights in our homes
l. 6 a man who fixes the holes in a wall or puts finishing touches on them
m. 18 examines garments for proper workmanship
n. 9 specialize in one area like sewing shoulder seams
o. 16 a person who presses garments.
p. 17 make personalized clothes and fit them perfectly to one individual.
q. 15 alter clothes to fit perfectly.
r. 11 may assist the bricklayer, uses the tool called a trowel.

PLACE THE WORD IN THE CORRECT SETTING


Designers
Pattern Maker
Cutters
Sewing Machine Operator
Markers
Hand Sewers
Tailors
Pressers
Inspectors
Alteration


1) foreman
3) cement mason
painter
plasterer
5) plumber
electrician
carpenter
bricklayer

PRE - TEST

6-8

CLUSTER OF COMMUNICATION

camera man

printing pressman

control room

reporter

music director

prop man

photoengraver

disc jockey

make-up editor

broadcast technician

FILL - IN

1. A soundproof room from which the director manages the show.
   _____(control room)_____

2. To become a successful _____(disc jockey)_____, one must have a pleasant and well-controlled voice, a good sense of timing and excellent pronunciation.

3. Sets up and maintains the electronic equipment used to record radio programs.
   _____(broadcast technician)_____.

4. The _____(make-up editor)_____ arranges things exactly as they will go on the pages of the paper.

5. The _____(reporter)_____ is to gather information of current events and write stories on many subjects for publication in daily newspaper.

6. The _____(photoengraver)_____ makes metal plates of illustrations and other copy work which cannot be set up in type.

7. _____(Music director)_____ is responsible for music co-ordination for over-all policy in connection with record distributors and promotion.

8. _____(Prop man)_____ takes care of all props, clothing, tools, for the actors and makes sure they are in the right place at the right time.

9. _____(Camera man)_____ holds the cards that tell the actors what to do.

10. _____(Printing pressman)_____ makes ready forms and press plates, set up, operates, clean and maintains presses including feeding, loading and unloading of paper. Controls ink flow and matching colors.

Lesson #18

6-8

Title: Newspaper

Goal: Students should develop an interest in newspaper occupations

Objectives: Students should identify and describe a greater number of newspaper occupations

(a) student should exhibit present knowledge of newspaper
(b) student should identify the following jobs: reporter, managing editor, cartoonist, artist, photoengraver, printing pressman, copy editor, make-up editor, salesman.
(c) student should identify types of communication

Obj.	Learning Experience	Materials	Evaluation
c	1. Place // // on board. Ask students what this means to them. (two elevens, two's, unfinished crosswords). Place a plus in between. Now what is the meaning? // plus // equals ////. Discuss what is communication. (Exchange of information). Discuss types of communication. Why is it important?	Chalk Board	Were the students able to identify types of comm. in past and present?
a	2. Discuss newspaper. What does it say? Types of articles.	Newspaper	Were the students able to exhibit their knowledge of the newspaper?
a,b	3. Discuss an article. Relate types of articles to jobs. Reporters, cartoonist, artist (stress types of schooling for each).	Cards	Were the students able to identify these jobs?
b,	4. Explain that these articles, comics, and illustrations have to be proofread by a copy editor and arranged by the make-up editor, sent to photoengraver and printing pressman, finally to salesman. Managing editor is in charge of the total paper. Students choose a main issue in school and write a report on it.		Were the students able to identify these occupations?

Title: T.V.

Goal: Students should develop an interest in T.V. Occupations

Objectives: Students should identify and describe a greater number of T.V. Occupations

(a) students should exhibit present knowledge about T.V.
(b) students should identify the following jobs: prop man, cameraman, carpenter, make-up artist, video technician, news writer, news director, producer, traffic manager, director, program director.

Obj.	Learning Experience	Materials	Evaluation
a	1. T.V. Guide - discuss what types of information is in guide. What types of T.V. programs? What types of people are programs geared for? Were any students on T.V.? At a T.V. Station?	T.V. Guide	Were the students able to relate to the T.V. guide and exhibit knowledge of T.V. Industry?
b	2. Identify a few jobs through discussion. Who puts the programs in order? Program director Who takes care of all the advertising? Traffic manager	Cards on board	
b	3. Show slides - discuss if possible	Slides	
b	4. Game: Cards are placed on the board. Student must unscramble one of the cards and tell what it is. He must also give a short description of the job. Class divided into two. If students give right answer, his side gets the point.		Were the student able to identify the occupations?

Lesson #20

6-8

Title: Getting A Job

Goal: Student should develop a concern for responsibility in applying for a job.

Objectives: Student should demonstrate his knowledge of the mechanics needed in applying for a job.

(a) student should exhibit present knowledge of the mechanics needed for applying for a job: social security, neatness in dress, filling out application.
(b) student should identify social security card and how it works.
(c) student should distinguish job opportunities that are available at the White Motor Corp. and decide field of interest according to abilities: truck driver, mechanic, engineer, machinist, secretary, stenographer, receptionist, office machine operator, shipping clerk.

Obj.	Learning Experience	Materials	Evaluation
a	1. Show students a picture of untidy boy. Describe the boy. Ask students what they feel he could improve on. Would this be an appropriate way to dress for work or when looking for work? What other actions should he keep in mind? Gum chewing, hands in pocket, stand straight, pen on hand.	Picture	Were the students able to exhibit knowledge about responsibility in taking care of yourself?
c	2. Pose problem to class. This boy needs a job badly. He goes to a nearby factory, White Motor Corp. to look for work because he has heard they are hiring. What types of jobs might he find there? (listed above). Other jobs may be mentioned. They should be described and cards placed on board.	Cards	Were the students able to distinguish jobs?
a,b	3. Continue story: John is walking in and is greeted by receptionist who hands him an application. Discuss with students (1) Social Security - describe use (S.S. Adm. Bldg. where to get E. 9 & St. Clair) it (2) Position desired. Salary. When can you report for work. Felony charge, health, employement before, education, family, oath, signature	White Motor Application	Were the students able to identify social security card? Were the students able to exhibit knowledge of mechanics.

Obj.	Learning Experience	Materials	Evaluation
a	4. Students should describe how it should be filled out: pen, print, neat, clear, cannot erase, correct spelling, correct information.	Written on board	Were the students able to exhibit knowledge of responsibility
a,b,c	5. Have students fill out application	Mimeographed sheets	Were the students able to exhibit knowledge of mechanics and decide field of interest according to ability

The students may fill out hobbies at the bottom of application.

WHITE TRUCK DIVISION

Application for Factory Employment

NAME ______________________________ ____________
Last First Middle Soc. Sec. No.

PRESENT ADDRESS ______________________________ ____________
Street City State Zip Phone

Position Desired ____________________ Salary Desired ____________

When can you report for work? ______________________________

Age ______ Date of Birth ____________ Sex: F___ M___ Wt.____ Ht. _____

Married ______ Single ______

Name of person in case of emergency______________________________
Relationship to you: ______________________________
Address______________________________
Phone Number ____________________

Ever convicted of a felony? ____________ Charge______________________________

HEALTH

List disease or injuries you may have had ______________________________

Family Physician: Name ____________________ Address ____________

RECORD OF EMPLOYMENT

Employer Address Kind of Work
1. ______________________________
2. ______________________________
3. ______________________________

EDUCATION

Name Location No. of years attended
Kindergarten:______________________________
Grade School:______________________________
Other: ______________________________

FAMILY

Father's Name____________________ Occupation ____________
Mother's Name____________________ Occupation ____________
No. of brothers and sisters _______ Names ____________________

In consideration of my employement by White Motor Corporation, I do hereby, represent all of the information on this application to be true, full and complete, and agree that any misrepresentation or concealment of a materials fact will constitute sufficient cause for dismissal.

Signed ____________________ Date ____________________

Lesson #21

4-8

Title: Communication -- Radio

Goal: Students should develop an interest in radio jobs.

Objectives: Students should identify and describe a greater number of radio jobs.

(a) students should exhibit present knowledge about radio stations and jobs affiliated with radio.
(b) students should identify the following jobs: station manager, program manager, music director, disc jockey, public relations consultant, braodcast technician, chief engineer.

Obj.	Learning Experience	Materials	Evaluation
a	1. Call letters scrambled Placed on board XIYW = WIXY WCLK = CKLW KWH = WHK GWAR - WGAR Students unscramble at seat		Were students able to unscramble the call letters?
a	2. Discuss the purpose of the call letters. Reason: Name Individual wave lengths		Could students relate to the discussion?
b	3. Class discussion of jobs Job/Description/Skill	Paper, pencil Chalk and board	
a,b	4. Students volunteer to role play and be a "disc jockey". Tape and play back Give example and directions.	Tape recorder	
a,b	5. Culminating activity. Students choose card and define it.		Were students able to define jobs?

DEFINITIONS

Station Manager -- in charge of whole operation.

Program Manager -- in charge of individual program.

Music Director -- responsible for music coordination for over-all policy in connection with record distribution and promotion.

Disc Jockey -- to succeed as a disc jockey one must have a pleasant and well-controlled voice, a good sense of timing and excellent pronunciation. He is responsible to the program director, is responsible for presenting a good station image while on the air and excellent pronunciation. He must also be a convincing salesman when presenting commercials.

Public Relation Consultant -- his job is to initiate contests and eye catching gimmicks to attract people to his radio station.

Broadcast Technician -- he sets up and maintains the electronic equipment used to record the radio programs.

Chief Engineer -- in charge of all electronic equipment.

Lesson #23

4-8

Title: Fine Arts and Humanities

Goal: Student should develop an interest in the fine arts occupations

Objectives: Student should identify and describe a greater number of fine arts jobs.

(a) student should exhibit an awareness of the arts.
(b) student should identify the following jobs: actor, actress, singer, singing teacher, interior designer, commercial artist, industrial artist, musician, dancer, director.
(c) student should relate knowledge to present experiences.

Obj.	Learning Experience	Materials	Evaluation
a,b	1. Pre-test -- oral	Sheet	
b	2. Role play -give example: act out playing the role of a waitress in a play. -class decides which role you were acting out by choosing from the list of cards on the board. -pass out role sheets -answer question students may have about theirs.	Role Sheets Cards	Were students able to role play the jobs effectively?
b	3. Discuss jobs presented and skills needed and tools used. -80% dancers are women - dancing teachers -they begin at age 12 -commercial artist-advertisement -industrial artist-design product -interior decorator-woman -musicians bands, night clubs, orchestras, T.V., motion pictures		
b,c	4. Try to relate jobs to T.V. program -musician - Partridge Family -actress - That Girl -commercial artist - Bewitched		Could students relate jobs to T.V. programs?
a,b,c	5. Define the "arts" -creativeness		
	6. Ask students to bring in pictures		

PRE-TEST

FINE ARTS AND HUMANITIES

1. I'll make a character come to life for you on T.V. or in motion pictures.
2. I'll entertain you with my voice.
3. I'll teach you how to entertain with your voice.
4. I'll use my artistic talent to improve the appearance and functional design of machine-made products.
5. I create the artwork you see on billboard posters, commercials, and magazine advertisements.
6. I'll use my artistic talent to make your home more attractive.
7. I'll play my instruments and entertain you.
8. I'll entertain you in the ballet, musicals, and sometimes you use my talent.
9. I'll take charge of the set and tell the actor and actress what to do.
10. I'll make the role of a girl come to life for you on T.V. and motion pictures.

A. Interior Designer
B. Commercial Artist
C. Industrial Artist
D. Musician
E. Director
F. Dancer
G. Actor
H. Actress
I. Singer
J. Singing Teacher

Lesson #24

5-8

Title: Review of Jobs

Objectives: Student should review jobs discussed in class.
Student should exhibit knowledge of jobs discussed thus far.

Obj.	Learning Experience	Materials	Evaluation
	1. Students choose comic book which they would like to read (reading for enjoyment).	Comic Books	
	2. Students create their own comic book series relating to any job discussed in class.	Job written on board	Were students able to carry out the assignment?

Lesson #25

6-8

Title: Consumer Homemaker

Goal: Student should develop an awareness of the consumer homemaker jobs

Objectives: Students should identify and describe a greater number of occupations in consumer homemaker.

(a) student should demonstrate an appreciation for these jobs.
(b) student should define the following jobs: home economist, nursemaid, housekeeper, caretaker, chauffeur, and butler, consumer, homemaker.

Obj.	Learning Experience	Materials	Evaluation
b	1. Introduction - talk about work a mother does. Students define jobs at top of page.	Paper Jobs stated on the board Dictionaries	How well did students define jobs?
b	2. Students choose at least 4 jobs to illustrate. Should do as many as possible. (divide paper in four and label the job under it). Student may write a caption if he likes.		Were students able to illustrate the jobs?
a,b	3. Papers collected and jobs discussed.		

Lesson #26

7-8

Title: Airplanes (Review and Manufacturing of Airplanes)

Objectives: Student should be able to describe jobs related to airplanes.

(a) student should demonstrate present knowledge concerning jobs related to airplanes.
(b) students should identify and describe the following jobs: machinist, welder, missle assembly mechanic, sheet metal worker, mathematician, engineer, draftsman, electrical engineer, astronaut.
(c) students should become acquainted with NASA

Obj.	Learning Experience	Materials	Evaluation
a	1. Discuss jobs related to airplanes and air Examples: Stewardess, Carries Mail, Business, Astronaut		Were students able to discuss previous learned jobs?
a	2. How does a plane work? Air pressure		
b	3. Manufacturing - big business People needed to work Engineer Mathematicians Machine operator Welders		
a,b	4. Let's view film and see if some of our answers were right.	Films - Cleve. Board of Ed. "Airplanes Work For Us" "Airplanes and How They Fly"	
a,b	5. Discuss points of interest on film which pertains to your class.		
c	6. Discuss NASA - National Aeronautics and Space Administration Cleveland & Florida - builds space vehicles NASA field trip - 8th graders		Could students rel NASA to space flight

Lesson #27

Gr. 4

Title: Banking

Goal: Student should develop an interest in the occupations of Banking

Objectives: Student should identify the occupations in Banking

(a) student should recognize the importance of school for banking occupations
(b) student should identify the types of money we use as exchange
(c) student should describe the way money travels and the importance of a Bank
(d) student should identify the specific jobs in banking

Obj.	Learning Experience	Materials	Evaluation
a,b	1. Put signs on board. $ -- ¢. What does it mean? What types of money do we use for exchange?		Were the students able to identify types of money exchange?
c	2. Discuss what they do with their money? Spend or save. Why place it in a bank?		Were the students able to recognize importance of a bank?
a,d	3. What jobs do you see being done in your bank? What are some of its procedures? Why is it important to know math and skills of language?		Were the students able to name some occupations in banking?
b,c,d	4. Film *How to Use Your Bank*. Discuss.	Film - Visual Aide Center	Were the students able to relate to film and identify more occupations in banking?
a,d	5. Show money bag, bookkeeper's book, deposit slips, etc. How do we use each?	From nearby bank	Were the students able to identify purpose of bank papers?
d	6. Game - card is held over pupil's head as other students give him hints and the pupils guess. Point is scored for team if correct answer is given.	Cards with occupations written	Were the students able to identify the occupations?

NAME ______________________________ DATE ____________________

DEVELOPMENTAL VOCATIONAL EDUCATION -- TEST -- COMMUNICATION

PART I -- FILL-IN

Camera man Reporter Photoengraver Broadcast Technicia

Printing Pressmen Music Director Disc Jockey

Control Room Prop Man Make-up Editor

1. To become a successful disc jockey, one must have a pleasant and well-controlled voice, a good sense of timing and excellent pronunciation.
2. A soundproof room from which the director manages the show. Control Room
3. Sets up and maintains the electronic equipment used to record the radio program. Broadcast Technician
4. The Make-Up Editor arranges things exactly as they will go on the pages of the newspaper.
5. The Reporter is to gather information of current events and write stories on many subjects for publication in the daily paper.
6. The Photoengraver makes metal plates of illustrations and other copy work which cannot be set up in type.
7. Music Director is responsible for music co-ordination for all connection with the record distributors and promotions.
8. Prop Man takes care of all props, clothing, tools, and equipment for the actors and makes sure they are in the right place at the right time.
9. Camera Man holds the cards that tell the actor what to do.
10. Printing pressman makes ready forms and press plates, sets up, operates, cleans and maintains presses, including feeding, loading and unloading of paper. He controls the flow of ink and colors.

PART II -- TRUE OR FALSE

1. True In order to get a job you must have a Social Security Card.
2. False The chief engineer at a radio station is in charge of programs about ships.
3. True The person who works with tape recorders is the video technician.
4. True Organization of the paper, putting each article where it belongs is the job of the make-up editor.
5. True The public relations man for the radio station tries to get people to listen to his radio station by initiating contest.

What is Communication? ____

What areas of communication covered in class ____________________________

JOB INFORMATION QUESTIONNAIRE

NAME ________________________________ SEX __________

SCHOOL ______________________________ GRADE __________

FATHER'S OCCUPATION ________________________________

1. WHAT ARE THE NAMES OF THE NEWSPAPERS IN CLEVELAND? ____________
____

2. NAME THE LARGEST AIRPORT IN CLEVELAND. ____________

3. NAME THREE AIRLINES THAT FLY TO AND FROM CLEVELAND ____________
____

4. WHAT KIND OF CARD WOULD YOU NEED BEFORE YOU COULD GET A JOB? ____________
____

5. THESE ARE SOME JOBS IN THE APPAREL INDUSTRY. SHOW HOW A DRESS OR SUIT CAN BE MADE BY PUTTING THESE JOBS IN THE ORDER THEY WOULD BE NEEDED TO MAKE THE PIECE OF CLOTHING. PUT A _1_ NEXT TO THE JOB WHICH MUST BE DONE FIRST, A _2_ NEXT TO THE JOB WHICH SHOULD BE DONE SECOND, ETC.

__________ SEWING MACHINE OPERATOR

__________ DESIGNER

__________ CUTTER

__________ PATTERN MAKER

__________ PRESSER

6. CIRCLE _TRUE_ FOR THE STATEMENTS WHICH ARE CORRECT AND CIRCLE _FALSE_ FOR THE STATEMENTS WHICH ARE NOT CORRECT.

TRUE FALSE FIREMEN GIVE FIRST AID TO PEOPLE IN THEIR HOMES.
TRUE FALSE POLICEMEN DECIDE IF PEOPLE ARE GUILTY WHEN THEY ARREST THEM.
TRUE FALSE POLICEMEN HAVE TO GO TO LAW SCHOOL IN ORDER TO BE HIRED.
TRUE FALSE FIREMEN HAVE TO INSPECT BUILDINGS TO FIND OUT IF THEY ARE SAFE.
TRUE FALSE POLICEMEN HAVE TO PASS A PHYSICAL EXAMINATION WHEN THEY ARE HIRED.
TRUE FALSE FIREMEN GET THEIR BASIC TRAINING ON THE JOB.

7. MATCH EACH JOB WITH THE CORRECT DESCRIPTION OF ITS MAJOR DUTIES. WRITE THE LETTER NEXT TO THE JOB THE DUTIES DESCRIBED. THERE IS ONLY ONE DESCRIPTION THAT IS CORRECT FOR EACH JOB.

_________ PRACTICAL NURSE

_________ NURSING AIDE

_________ MEDICAL TECHNOLOGIST

_________ PHYSICAL THERAPIST

_________ NUTRITIONIST

A. CONCERNED WITH THE BEDSIDE CARE OF PATIENTS. FOR EXAMPLE, TAKES THEIR PULSE, TEMPERATURE, AND BLOOD PRESSURE.

B. PERFORMS LABORATORY TESTS AND PROCEDURES, FOR EXAMPLE, EXAMINES BLOOD SAMPLES.

C. GIVES MEDICINE TO PATIENTS. REPORTS AND RECORDS THE PATIENTS' DAILY CONDITION.

D. WORKS WITH PATIENTS WHO HAVE BONE OR MUSCLE INJURIES.

E. APPLIES KNOWLEDGE OF "GOOD" FOOD TO IMPROVE PATIENTS' HEALTH.

F. PERFORMS DAILY TASKS NEEDED TO MAKE PATIENTS COMFORTABLE. FOR EXAMPLE, MAKES BEDS AND KEEPS ROOM NEAT.

8. WHICH JOB DOES NOT BELONG WITH THE OTHERS?

_____A. FLIGHT ENGINEER
_____B. RAMP SERVICEMAN
_____C. CHIEF ENGINEER
_____D. PILOT

_____A. PRODUCER
_____B. EDITOR
_____C. REPORTER
_____D. PUBLISHER

_____A. TELEPHONE OPERATOR
_____B. PROGRAM DIRECTOR
_____C. SERVICE REPRESENTATIVE
_____D. INSTALLER

6. UNDERLINE THE PLACE WHERE EACH JOB WOULD MOST LIKELY BE FOUND.

EXAMPLE: POSTMAN

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

INSTALLER

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

PHOTO ENGRAVER

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

HIGH AND LOW LINEMAN

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

CHEMIST

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

NUCLEAR ENGINEER

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

BROADCAST TECHNICIAN

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

MAKE-UP ARTIST

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

DOG WARDEN

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

GEOLOGIST

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

BARKER MACHINE OPERATOR

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

WINDOW CLERK

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

DIRECTORY CLERK

NEWSPAPER
POST OFFICE
T.V. STATION
TELEPHONE COMPANY

SEWAGE PLANT ATTENDANT

POLICE DEPARTMENT
ILLUMINATING COMPANY
WATER DEPARTMENT
EAST OHIO GAS COMPANY

BLAST FURNACE WORKER

AEROSPACE INDUSTRY
ALUMINUM INDUSTRY
IRON AND STEEL
PAPER INDUSTRY

SUPERCALENDER OPERATOR	ENGINE MECHANIC	PULPMAKER WORKER
AEROSPACE INDUSTRY	AEROSPACE INDUSTRY	AEROSPACE INDUSTRY
ALUMINUM INDUSTRY	ALUMINUM INDUSTRY	ALUMINUM INDUSTRY
IRON AND STEEL	IRON AND STEEL	IRON AND STEEL
PAPER INDUSTRY	PAPER INDUSTRY	PAPER INDUSTRY

10. WHICH ONE OF THE FOLLOWING BANK SERVICES DOES THE TELLER HANDLE MOST?

______ A. MORTGAGE LOANS

______ B. CREDIT CARD ACCOUNTS

______ C. SAVINGS AND CHECKING ACCOUNTS

______ D. CHARGE ACCOUNTS

11. WHO GIVES INFORMATION TO PEOPLE WHO COME INTO OR CALL A BUSINESS OFFICE?

______ A. STENOGRAPHER

______ B. RECEPTIONIST

______ C. EXECUTIVE SECRETARY

______ D. PUBLIC RELATIONS WORKER

12. WHO KEEPS A COMPLETE AND UP-TO-DATE RECORD OF MONEY USED IN BUSINESS ACTIVITIES?

______ A. BOOKKEEPER

______ B. CASHIER

______ C. COMPANY VICE-PRESIDENT

______ D. LAWYER

13. WHO KEEPS TRACK OF MERCHANDISE TRANSFERRED FROM ONE PLACE TO ANOTHER BY BUSINESS FIRMS?

______ A. DISTRIBUTION WORKER

______ B. SHIPPING AND RECEIVING CLERK

______ C. WHOLESALER

______ D. MARKET RESEARCHER

BEST COPY AVAILABLE

14. WHO HAS THE MOST FREEDOM TO CHANGE THE ROUTE OF A TRIP?

_____ A. PILOT

_____ B. TRAIN ENGINEER

_____ C. TRUCK DRIVER

_____ D. BUS DRIVER

THIS IS A LIST OF EIGHTEEN JOBS. READ THROUGH THE LIST TO MAKE SURE YOU KNOW ALL THE JOBS. THINK ABOUT HOW MUCH YOU WOULD LIKE TO WORK ON EACH OF THESE JOBS. NOW, DECIDE ON THE ONE JOB THAT YOU WOULD REALLY LIKE TO HAVE MORE THAN ANY OTHER. WRITE THE NAME OF THAT JOB IN THE SPACE NEXT TO "1 - BEST JOB". NOW, DECIDE WHICH JOB YOU WOULD REALLY NOT LIKE TO HAVE. DO NOT WORRY ABOUT THE REASON YOU DON'T WANT THE JOB. WRITE THE NAME OF THIS JOB IN THE SPACE NEXT TO "1 - WORST JOB". AT THE BOTTOM OF THE PAGE. CONTINUE TO ALTERNATELY CHOOSE BETWEEN THE "NEXT BEST JOB" AND THE "NEXT WORST JOB" UNTIL YOU HAVE WRITTEN THE NAMES OF ALL THE JOBS IN THE SPACES. AS YOU SELECT EACH JOB, DRAW A LINE THROUGH IT SO YOU DON'T CHOOSE IT TWICE. REMEMBER ALL THESE JOBS ARE FOR BOTH MEN AND WOMEN.

DOCTOR

ACTRESS/ACTOR

NURSE

CAR MECHANIC

TEACHER

POLICEMAN

EXECUTIVE SECRETARY

WAITER/WAITRESS

MODEL

LAWYER

REPORTER

BEAUTICIAN

GARBAGE COLLECTOR

COOK

DISC JOCKEY

STEWARD/STEWARDESS

ELECTRICIAN

AIRPLANE PILOT

1. BEST JOB ____________________

2. NEXT BEST JOB ____________________
3. NEXT BEST JOB ____________________
4. NEXT BEST JOB ____________________
5. NEXT BEST JOB ____________________
6. NEXT BEST JOB ____________________
7. NEXT BEST JOB ____________________
8. NEXT BEST JOB ____________________
9. NEXT BEST JOB ____________________

9. NEXT WORST JOB ____________________
8. NEXT WORST JOB ____________________
7. NEXT WORST JOB ____________________
6. NEXT WORST JOB ____________________
5. NEXT WORST JOB ____________________
4. NEXT WORST JOB ____________________
3. NEXT WORST JOB ____________________
2. NEXT WORST JOB ____________________

1. WORST JOB ____________________

GETTING A JOB

GOOD ___ ___ ___ ___ ___ BAD
WEAK ___ ___ ___ ___ ___ STRONG
SAD ___ ___ ___ ___ ___ HAPPY
WISE ___ ___ ___ ___ ___ FOOLISH
BRAVE ___ ___ ___ ___ ___ COWARDLY
DIRTY ___ ___ ___ ___ ___ CLEAN
KIND ___ ___ ___ ___ ___ CRUEL
IMPORTANT ___ ___ ___ ___ ___ UNIMPORTANT

NEWSPAPER REPORTER

GOOD ___ ___ ___ ___ ___ BAD
WEAK ___ ___ ___ ___ ___ STRONG
SAD ___ ___ ___ ___ ___ HAPPY
WISE ___ ___ ___ ___ ___ FOOLIS
BRAVE ___ ___ ___ ___ ___ COWARDLY
DIRTY ___ ___ ___ ___ ___ CLEAN
KIND ___ ___ ___ ___ ___ CRUEL
IMPORTANT ___ ___ ___ ___ ___ UNIMPORT

TELEPHONE INSTALLER

GOOD ___ ___ ___ ___ ___ BAD
WEAK ___ ___ ___ ___ ___ STRONG
SAD ___ ___ ___ ___ ___ HAPPY
WISE ___ ___ ___ ___ ___ FOOLISH
BRAVE ___ ___ ___ ___ ___ COWARDLY
DIRTY ___ ___ ___ ___ ___ CLEAN
KIND ___ ___ ___ ___ ___ CRUEL
IMPORTANT ___ ___ ___ ___ ___ UNIMPORTANT

MAIL CARRIER

GOOD ___ ___ ___ ___ ___ BAD
WEAK ___ ___ ___ ___ ___ STRONG
SAD ___ ___ ___ ___ ___ HAPPY
WISE ___ ___ ___ ___ ___ FOOLISH
BRAVE ___ ___ ___ ___ ___ COWARD
DIRTY ___ ___ ___ ___ ___ CLEAN
KIND ___ ___ ___ ___ ___ CRUEL
IMPORTANT ___ ___ ___ ___ ___ UNIMPO

Directions: State your feelings about specific jobs!

REFERENCE MATERIALS

Dictionary of Occupational Titles
Career Ed. Resource Guide
    Gen. Learning Corp. of Morristown
    Curriculum Innovation Inc., N.Y.
    501 Lake Forest Ave.
    Highland, Ill. 60040
Career World
SRA - Handbook of Job Facts
Yellow Pages of Learning Resource
    Group for Governmental Education, Inc., 1972.
Career Information Kit - SRA
Ohio Career Continuum Program
    Career Orientation - Ohio State Board of Education, 1972.
Youth Service Directory of Greater Cleveland
Occupational Information in Elementary Schools, Willa Norris
Pleasant Valley Junior High School Career Orientation Program

Quarterly Report -- Jane Ozello and Jean Dzurilla

*Developmental Vocational Education Program - Cleveland Board of Education, William Sims. (Speakers, Films, Ideas)

SUPPLEMENTARY MATERIALS -- not used

SRA
    Key - Career Exploration
    Junior Guidance Series Booklet
    Job Exploration Kit
    Job Family Series Booklets
    Occupational Exploration
Westinghouse Learning Press
    100 Park Ave., N.Y., N.Y. 10017
    Career Awareness -- cassettes and films
ERC Report, Vol. 9, number 4
    Educational Research Council of America
    March 1973 - pp. 10-11
    Occupational education series of careers for grade 4
Ecology Game Kit - Coca Cola Co.
World of Work -- Economic Ed. (record, filmstrips, cassettes)
San Diego Board of Education - transparencies on how to decide and get a job
Tommy Looks At Farming, B.F. Goodrich Co., Akron, Ohio (comic book)
U.S. Postal Service
    Postmaster General
    Washington, D.C. - (filmstrip -- "90 billion raindrops" -- varied jobs in postal work with teacher's guide)

Senior Weekly Reader by Xerox - Columbus, Ohio (career choices)
Annual Report, Cleveland, Ohio
Cleveland City Council, 1972
Visual Aide Center - Cleveland Public Schools

Films

- Policeman
- A Day with Fireman Bill
- Simple Demonstration With Water
- Conserving Our Natural Resources
- Communication and Our Town
- Seaport
- Transportation by Inland Waterways
- Trucks and Trains
- Railroad Builders
- Transportation by Freight Trains
- Fiber to Fabric
- Mass Production (How clothing is made)
- Clothes Around the World
- Industry
- Careers in Industry
- How to Use Your Bank
- Building Trades - The House Builders
- Your Career as a Secretary
- Steel in America
- How Trees Help Us
- Our Natural Resources
- Conserving Our Natural Resources
- Exploring the Farmland
- Garden Plants and How They Grow
- Desert Farming
- Silver - mining
- Copper - mining
- Airplanes and How They Fly
- Airplanes Work For Us
- Beauty For a Career
- Careers in Personal Services
- Health Careers - I,II, III,IV
- Scientists at Work
- Careers in Building Trades
- Designs for Growing
- Careers - Clerical

Films - DVEP

- Careers in Public Services
- Career In Sales
- Careers in Personal Services
- What's Under the Ocean
- Cleveland World Port
- Money In the Bank
- The Newspaper - The Joys of Sellin
- Filmstrip on Conservation
- Building a House

Career pamphlets - collection of pamphlets acquired

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DATE ______________________

WHITE TRUCK DIVISION

APPLICATION FOR FACTORY EMPLOYMENT

All information given on this form will be treated strictly confidential. It is to the applicant's advantage to answer each question fully and accurately. The use of this blank does not indicate there are any positions open and in no way obligates the company. Misrepresentation or concealment of a material fact will constitute cause for dismissal if hired. Before being employed each applicant is photographed and fingerprinted, and must pass a physical examination satisfactory to the company.

NAME (*Print*)	FIRST	MIDDLE					
ENT ADDRESS (*Print*)	CITY	STATE	ZIP	FORMER ADDRESS (ST.)	CITY	STATE	ZIP
LONG AT ABOVE ESS:	PHONE	OWN ☐ NEIGHBORS ☐	PHONE IN NAME OF:	FORMER ADDRESS (ST.)	CITY	STATE	ZIP
ANENT HOME ADDRESS	CITY	STATE	ZIP	FORMER ADDRESS (ST.)	CITY	STATE	ZIP
TION DESIRED	SALARY DESIRED?	HAVE YOU APPLIED HERE PREVIOUSLY? IF SO, WHEN?	WHEN CAN YOU REPORT FOR WORK?				
POSITIONS YOU WILL CONSIDER	WERE YOU EVER EMPLOYED BY THIS COMPANY? IF SO, WHEN & WHERE?	WHAT IS YOUR SOCIAL SECURITY NUMBER?					

se Hand Write Balance of Application

PERSONAL

	DATE OF BIRTH			INDICATE (✓) WHETHER		WEIGHT	HEIGHT	PHYSICAL DEFECTS	HAVE YOU EVER BEEN THROUGH BANKRUPTCY?
	MONTH	DAY	YEAR	MALE	FEMALE				

INDICATE (✓) WHETHER				INDICATE (✓) WHETHER LIVING WITH			HOW MANY CHILDREN?	HOW MANY DEPENDENTS? (INCLUDE SELF)	IF DIVORCED, WHAT AMOUNT OF ALIMONY DO YOU PAY?
GLE	MARRIED	WIDOWED	DIVORCED	PARENTS	WIFE HUSBAND	SELF			

OU OWN OR RENT YOUR HOME, OR OU BOARD?	NAME OF PERSON TO BE CALLED IN AN EMERGENCY? NAME RELATIONSHIP IF ANY? ADDRESS? PHONE NUMBER?

		INDICATE APPROXIMATE AMOUNT OF YOUR		HOW MUCH LIFE INSURANCE DO YOU CARRY?
OU OWN AN AUTOMOBILE ?		ASSETS	INDEBTEDNESS	
E	YEAR			

CATE (✓) WHETHER YOU HAVE EVER BEEN CONVICTED OF A FELONY.

	YES	DATE?	PLACE?	CHARGE?	DISPOSITION?	NAME OF COURT OF RECORD?

E YOU EVER BEEN OR ARE YOU NOW A MEMBER NY ORGANIZATION ADVOCATING OVERTHROW OF U.S. GOVERNMENT? YES ☐ NO ☐	UNITED STATES CITIZEN YES ☐ NO ☐	

WHAT UNITED STATES MILITARY ORGANIZA- S ARE YOU A MEMBER?	SELECTIVE SERVICE CLASSIFICATION	SELECTIVE SERVICE ORDER NUMBER	LOCAL DRAFT BOARD NUMBER	LOCATION OF DRAFT BOARD CITY STATE

HEALTH

CK ANY OF THE FOLLOWING WHICH YOU HAVE HAD:

TURE ☐ ARTHRITIS ☐ RHEUMATISM ☐ HEADACHES ☐ DIZZY OR FAINTING SPELLS ☐ COUGHING ☐

ACHE ☐ HEART TROUBLE ☐ STOMACH TROUBLE ☐ SKIN DISEASE ☐ OIL DERMATITIS ☐ KIDNEY TROUBLE ☐

T ANY OTHER DISEASE OR INJURIES WHICH YOU MAY HAVE HAD: ______________________

____

N WAS YOUR LAST SERIOUS ILLNESS AND WHAT WAS ITS NATURE? ______________________

____

T ANY PHYSICAL DEFECTS YOU MAY HAVE: ______________________

ILY PHYSICIAN: NAME ______________________ ADDRESS ______________________

ICATE (✓) WHETHER YOU HAVE EVER DRAWN WORKMEN'S COMPENSATION

O	YES	IF SO, WHAT WAS NATURE OF DISABILITY?	NAME OF EMPLOYER PAYING COMPENSATION?	DURATION OF COMPENSATION?

PERSONS IN THIS COMPANY WITH WHOM YOU ARE ACQUAINTED

NAME	DEPARTMENT	RELATIONSHIP TO YOU, IF ANY

This record should include all positio
ARMY, NAVY, MARINE, and all other MILIT

EMPLOYER Give full name of company or firm	Street Address	City	State	Kind of B

EDUCATION

Education	Name of School	Location	No. of yrs. Attended	Year Graduated	Course Taken	Diploma or Certificate
Grade School						
Jr. High School						
High School						
Trade School or Other						

FAMILY

Father's name	Street address of Father	Father's occupation
Wife (or Husband's name)	Street address of Wife (or Husband)	Wife (or Husband's) occupation
No. of brothers	No. of sisters	

Names, ages and relationship of persons dependent on you for support

4.

5.

6.

ORD

...hool or during school and should include

...exact as possible as to dates. List last position first.

...e Employed	To	Work you did	Rate of Pay	Reason for leaving	Supervisor, Badge No., Dept.
Yr.	Mo. Yr.				

INDICATE NUMBER MONTHS OF ACTUAL EXPERIENCE IN ANY OF THE FOLLOWING:

Machine	OPER-ATE	SET-UP	Machine	OPER-ATE	SET-UP	Machines	OPER-ATE	SET-UP	Machines	OPER-ATE	SET-UP	Machines	OPER-ATE	SET-UP
...ING			DRILL—RADIAL			GRINDER—SURFACE			LATHE—SEMI-AUTO.			NIBBLER		
...MILL			GEAR CUTTER			HAMMER—POWER			LATHE—TURRET			PUNCH PRESS		
...ATOR			GRINDER—CENTERLESS			HOBBER			MILLER—PLAIN			SCREW MACH—AUTO		
...H			GRINDER—EXTERNAL			HONE			MILLER—HAND			SHAPER		
—PLAIN			GRINDER—INTERNAL			LAPPER			MILLER—PROFILE			SHEAR—SQUARE		
—MULTIPLE			GRINDER—GEAR			LATHE—ENGINE			MILLER—SPLINE			SHEAR—ROTARY		

...tions Performed	Mo's.	Names of Metal Worked On (List all)	Operations Performed	Mo's.	Names of Metal Worked On (List all)
...TTING			SPOT WELDING		
...ELDING			BRAZING		
...WELDING			TORCH SOLDERING		
...WELDING			METAL FINISHING		

...hat work do you consider yourself best qualified?

...ou read blueprints? Micrometers? Sharpen Tools?

...ot, are you willing to work nights? Who referred you to us?

I understand that my physical classification as "Accepted or " Observation" does not guarantee to me that I am free from disease, congenital defects or weaknesses and does not necessarily mean that I am physically perfect, and I hereby understand and accept employment under these conditions. I understand that an annual physical examination at company request is a condition of employment.

In consideration of my employment by White Motor Corporation, I do hereby, on behalf of myself and any and all persons whatsoever, for the benefit of this company, expressly waive any and all privileges which I may now or hereafter have in respect of any and all communications made by me to any physician, other person or hospital and in respect of any facts, knowledge or information (including any reports, charts and x-ray pictures and copies thereof) received or acquired by him or them in connection with the examination, attendance, treatment or care of me by him or them, and all provisions of law forbidding any physician, other person or hospital who or which as heretofore attended, examined, treated or cared for me or who or which may hereafter attend, examine, treat or care for me, from disclosing or testifying to any facts, knowledge or information (including any reports, charts and x-ray pictures and copies thereof) so received or acquired by him or them, and I hereby authorize any physician, other person or hospital who or which has attended, examined, treated or cared for me or who or which may hereafter attend, examine, treat or care for me, upon request of White Motor Corporation, or its agents, to furnish to it or them any facts, knowledge or information (including any reports, charts and x-ray pictures and copies thereof) so received or acquired concerning me, by such physician, other person or hospital.

I represent all of the information on this application to be true, full and complete, and agree that any misrepresentation or concealment of a material fact will constitute sufficient cause for dismissal.

I certify that I have never been convicted of a felony, except as noted in Part 3. I hereby agree to be photographed and fingerprinted at Company request.

I understand and agree that my employment by White Motor Corporation is [illegible] that upon layoff or termination of such employment, I will only be entitled to and will accept in full of all claims, compensation to and including the date of such layoff or termination at the rate then in effect.

I certify I am not and have not been a member of the Communist Party or affiliated with such party. I am not and have not been a member of and I do not believe in or support and have not believed in or supported any organization that believes in or teaches or has believed in or taught the overthrow of the United States Government by force or by any illegal or unconstitutional means.

I acknowledge that you have advised me that in connection with this application an INVESTIGATIVE CONSUMER REPORT may be requested by you, and that this investigation will include information on my character, general reputation, personal characteristics and mode of living. I hereby authorize your obtaining such an INVESTIGATIVE CONSUMER REPORT.

I understand that I have a right to make a request to you to learn the complete nature and scope of the report and that you have established a procedure to provide the same.

SIGNED ______________________________

NOTIFY US OF CHANGES IN YOUR ADDRESS OR PHONE NUMBER *WE USUALLY DO NOT HOLD APPLICATIONS LONGER THAN SIX MONTHS*

THIS SPACE NOT TO BE FILLED IN BY APPLICANT

PHYSICAL E G F P

EYES E G F P

MENTAL E G F P

EARS E G F P

HEIGHT FEET INCHES

WEIGHT POUNDS

ACCEPTED (✓) REJECTED (✓) RECALL—OBSER. (✓) LIMIT. SERVICE (✓)

REMARKS

1. ENTER ON HIRE SLIP

2. OTHER COMMENTS

EXAMINING PHYSICIAN

REMARKS

TEST RESULTS

PERSONNEL OFFICER

DATE	INTERVIEWED BY	REFERRED TO	DEPARTMENT	REMARKS OR RESULT

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St. Francis School
7107 [illegible] Avenue
Cleveland, Ohio 44103
March [illegible]

[illegible] ____

[illegible] the Developmental Vocational Education Program, for which I am responsible, is a special [illegible] project at St. Francis which acquaints the students with career occupation. Miss [illegible] and Miss Schade's classes have been participating in this program.

[illegible] trip has been planned for these classes to visit the Cleveland Plain Dealer [illegible]. We will leave the school at 11:00 a.m. and return at 12:30 p.m. Please give [illegible] permission to attend.

Sincerely,

Sister Mary St. Jude, S.N.D.
Miss Jane [illegible]

[illegible] by March 23, 197[illegible]

- -

____ is given my permission to attend the field trip [illegible] the Cleveland Plain Dealer on Tuesday, March 27, leaving school at [illegible] and returning at 12:30 p.m.

____
Signature

Transportation Department

TRIP PERMIT AND DRIVER'S TRIP REPORT - BOARD OF EDUCATION BUS

Date of Trip March 27, 1973

Mileage Ending

Vehicle No. 210

Mileage Start

Driver

TOTAL MILES

Time Left Garage (or other location)

Teacher in Charge Mrs Jane Ozello

SCHOOL OR PICKUP POINT St. Francis Elementary

ADDRESS - SCHOOL OR PICKUP POINT 7107 Myron Avenue

TIME OF BUS ARRIVAL
at School or Pickup Point

Requested 10:50 a.m.

Actual

No. of Pupils 52

No. of Adults 3

FIELD TRIP DESTINATION Cleveland Plain Dealer

ADDRESS - FIELD TRIP 1801 Superior N. E.

DEPARTURE TIME from Place Visited:

Contemplated 12:15 a.m.

Actual

Time Returned to School or Pickup Point

Time Returned to Garage (or other location)

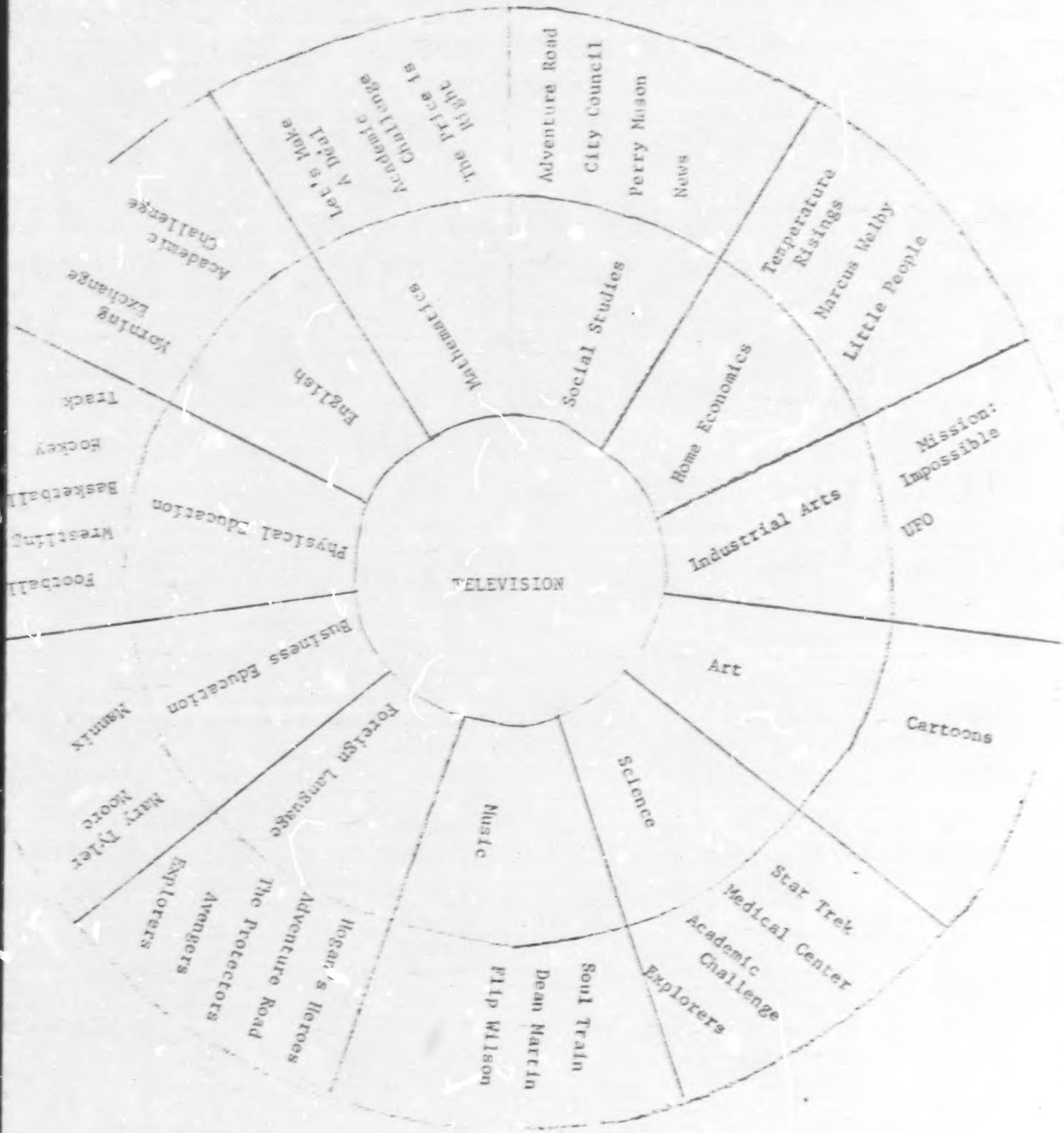
Attention: Principal/Teacher
Please take a moment to double-check this copy of the Trip Permit. If there is anything incorrect, phone us at 696-2929, extension 456.

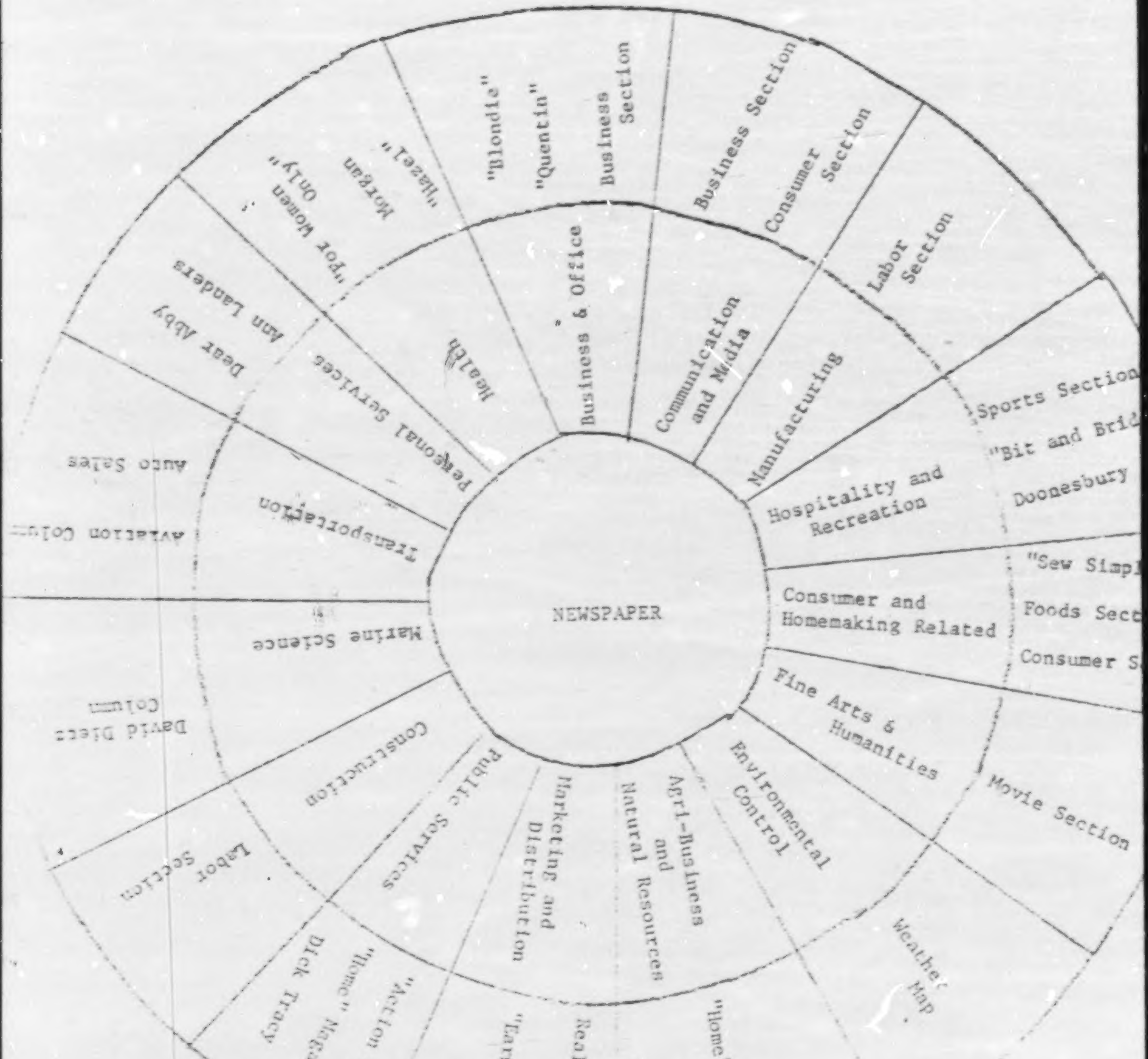
PERMIT ISSUED:

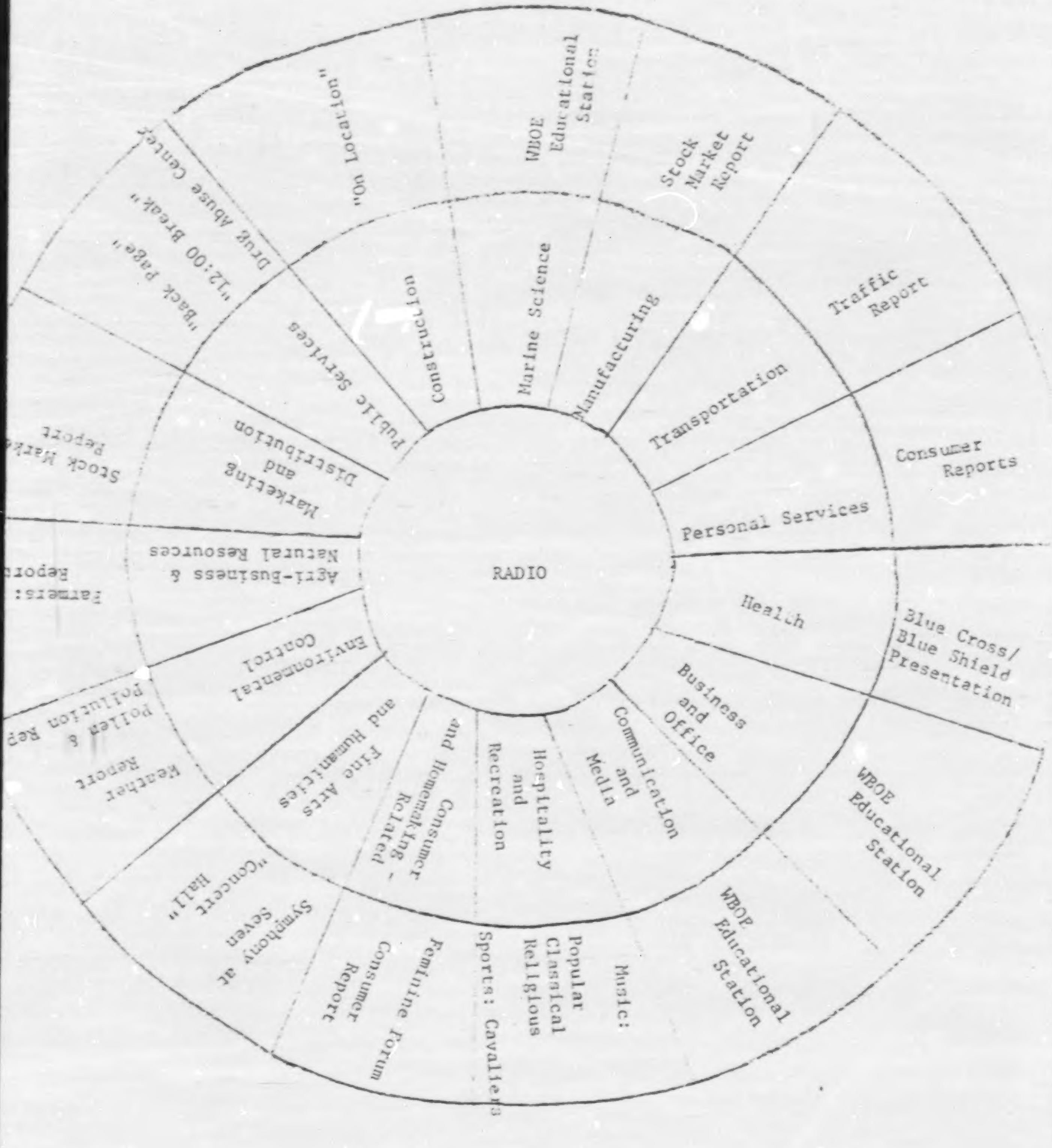
P. E. [illegible]

Supervisor of Transportation

Date Issued 3-19-73


TELEVISION
Social Studies
Adventure Road
City Council
Perry Mason
News
Home Economics
Temperature Risings
Marcus Welby
Little People
Industrial Arts
Mission: Impossible
UFO
Art
Cartoons
Science
Star Trek
Medical Center
Academic Challenge
Explorers
Music
Soul Train
Dean Martin
Flip Wilson
Foreign Language
Hogan's Heroes
Adventure Road
The Protectors
Avengers
Explorers
Business Education
Mannix
Mary Tyler Moore
Physical Education
Football
Wrestling
Basketball
Hockey
Track
English
Morning Exchange
Academic Challenge
Mathematics
Let's Make A Deal
Academic Challenge
The Price is Right


NEWSPAPER
Business & Office
Communication and Media
Manufacturing
Hospitality and Recreation
Consumer and Homemaking Related
Fine Arts & Humanities
Environmental Control
Agri-Business and Natural Resources
Marketing and Distribution
Public Services
Construction
Marine Science
Transportation
Personal Services
Health
"Blondie"
"Quentin"
Business Section
Business Section
Consumer Section
Labor Section
Sports Section
"Bit and Brid
Doonesbury
"Sew Simpl
Foods Sect
Consumer S
Movie Section
Weather Map
"Home" Magazine
Real Estate News
"Earnings Digest"
"Action Line"
"Home" Magazine
Dick Tracy
Labor Section
David Dietz Column
Aviation Colu
Auto Sales
Dear Abby
Ann Landers
"For Women Only"
Morgan
"Hazel"


RADIO
Construction
Marine Science
Manufacturing
Transportation
Personal Services
Health
Business and Office
Communication and Media
Hospitality and Recreation
Consumer and Homemaking - Related
Fine Arts and Humanities
Environmental Control
Agri-Business & Natural Resources
Marketing and Distribution
Public Services
"On Location"
WBOE Educational Station
Stock Market Report
Traffic Report
Consumer Reports
Blue Cross/ Blue Shield Presentation
WBOE Educational Station
WBOE Educational Station
Music: Popular Classical Religious
Sports: Cavaliers
Feminine Forum Consumer Report
Symphony at Seven "Concert Hall"
Weather Report
Pollen & Pollution Rep
Farmers: Repor
Stock Marke Report
"Back Page" "12:00 Break" Drug Abuse Center

Bulletin Boards

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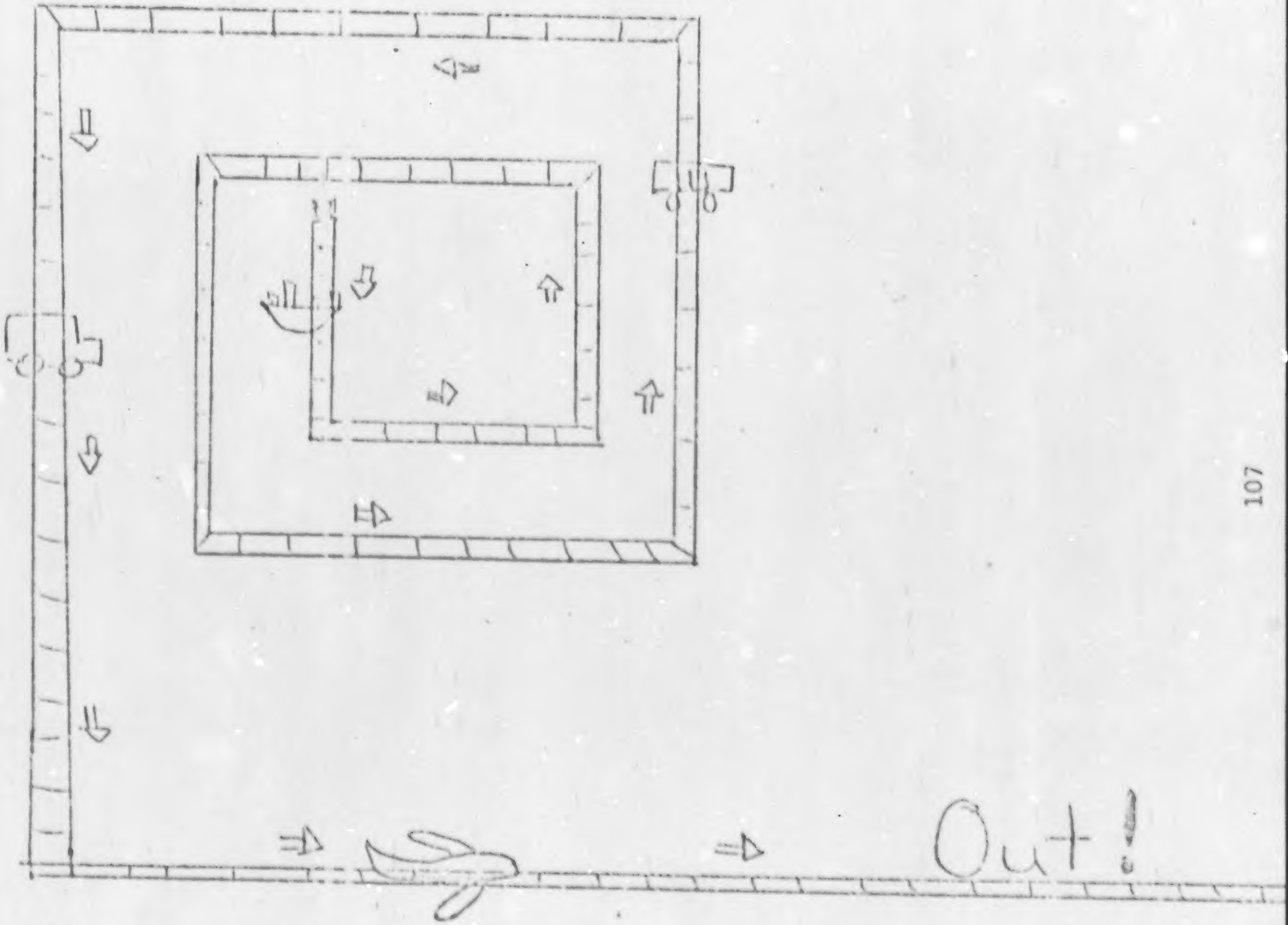
Riddle Your Way Out!



Answer Box

Developmental Vocational Education

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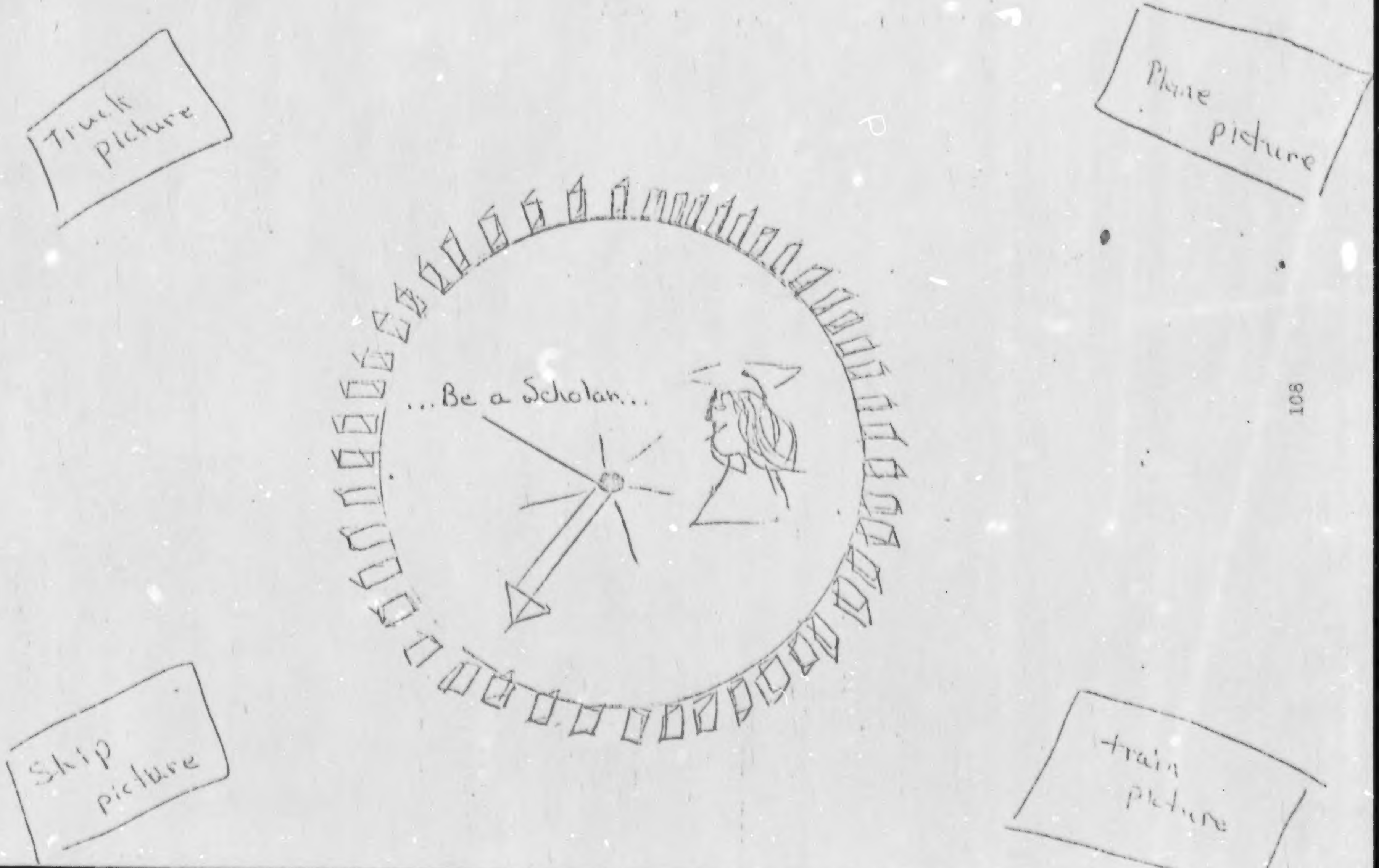
[illegible] names were inserted in the pockets of boat, train, truck, + plane. The answers were placed under the opening door.

This serves as a good review of the important facts of each area in transportation and their jobs.

Spin A Job

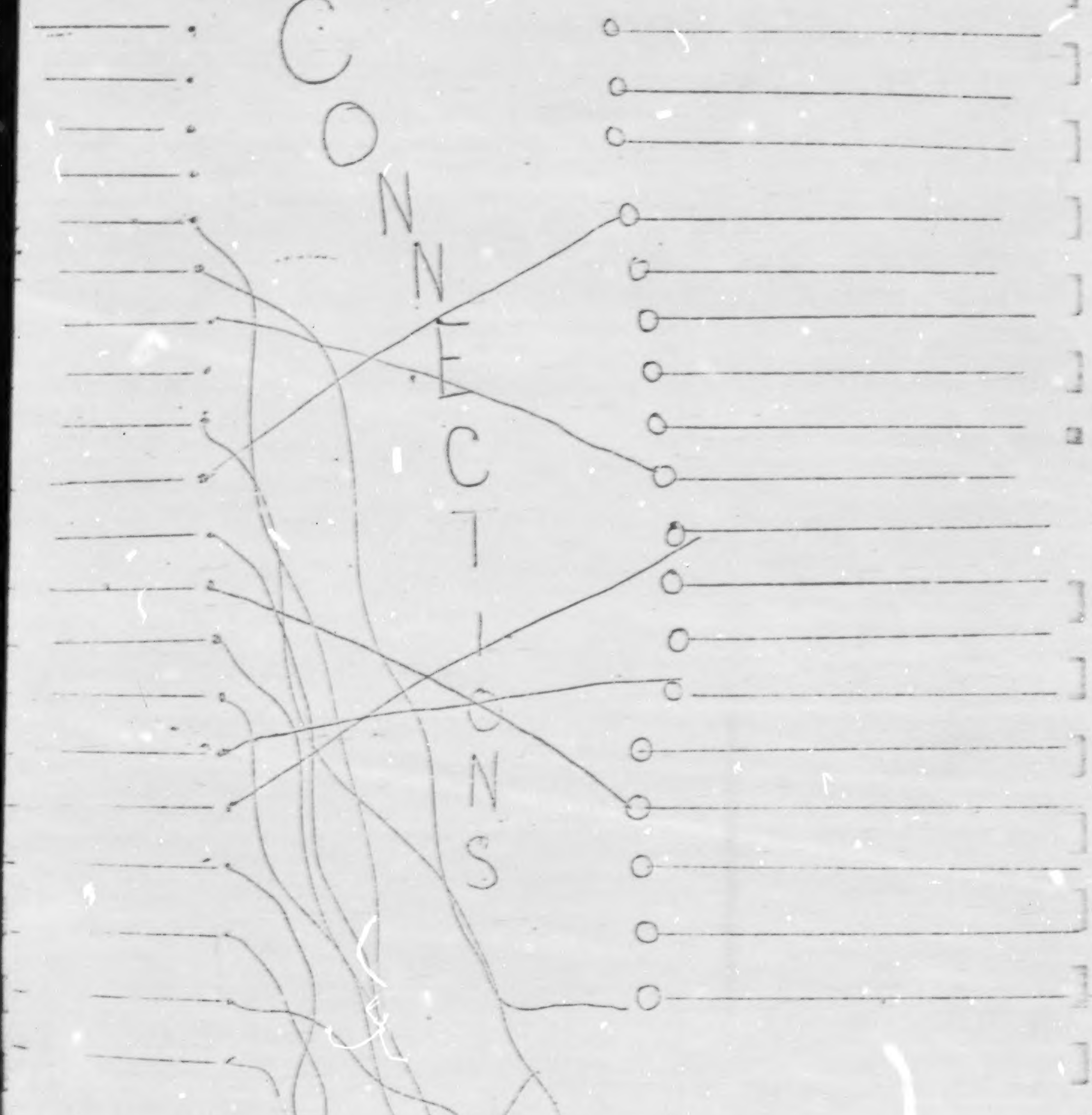

Truck picture
Plane picture
...Be a Scholar...
Ship picture
train picture

urpose:

Student spins dial. Lands on job name, describes job; then opens
Book to correct answer.

Picture of graduate in spinner

Travel


CONNECTIONS

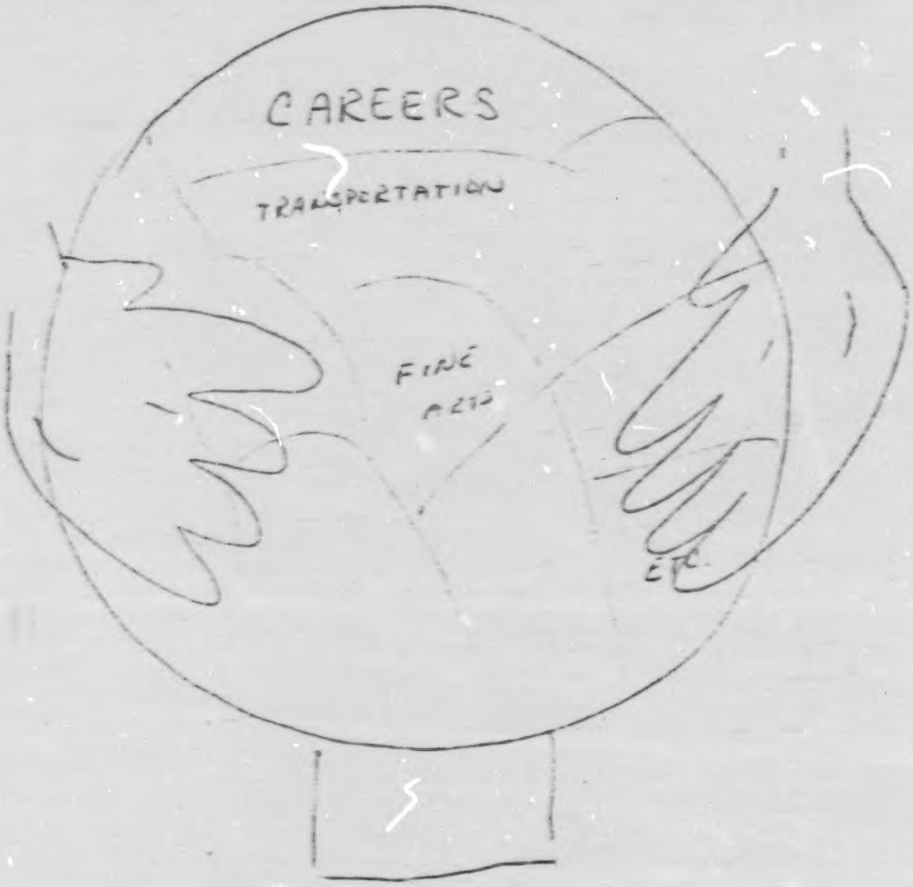
pose.

Student is to make proper connections. Yarn (different colors) is attached to first column 1" (job titles) to (definitions) 2nd column. Color Code is listed on side of first column.

J.O.

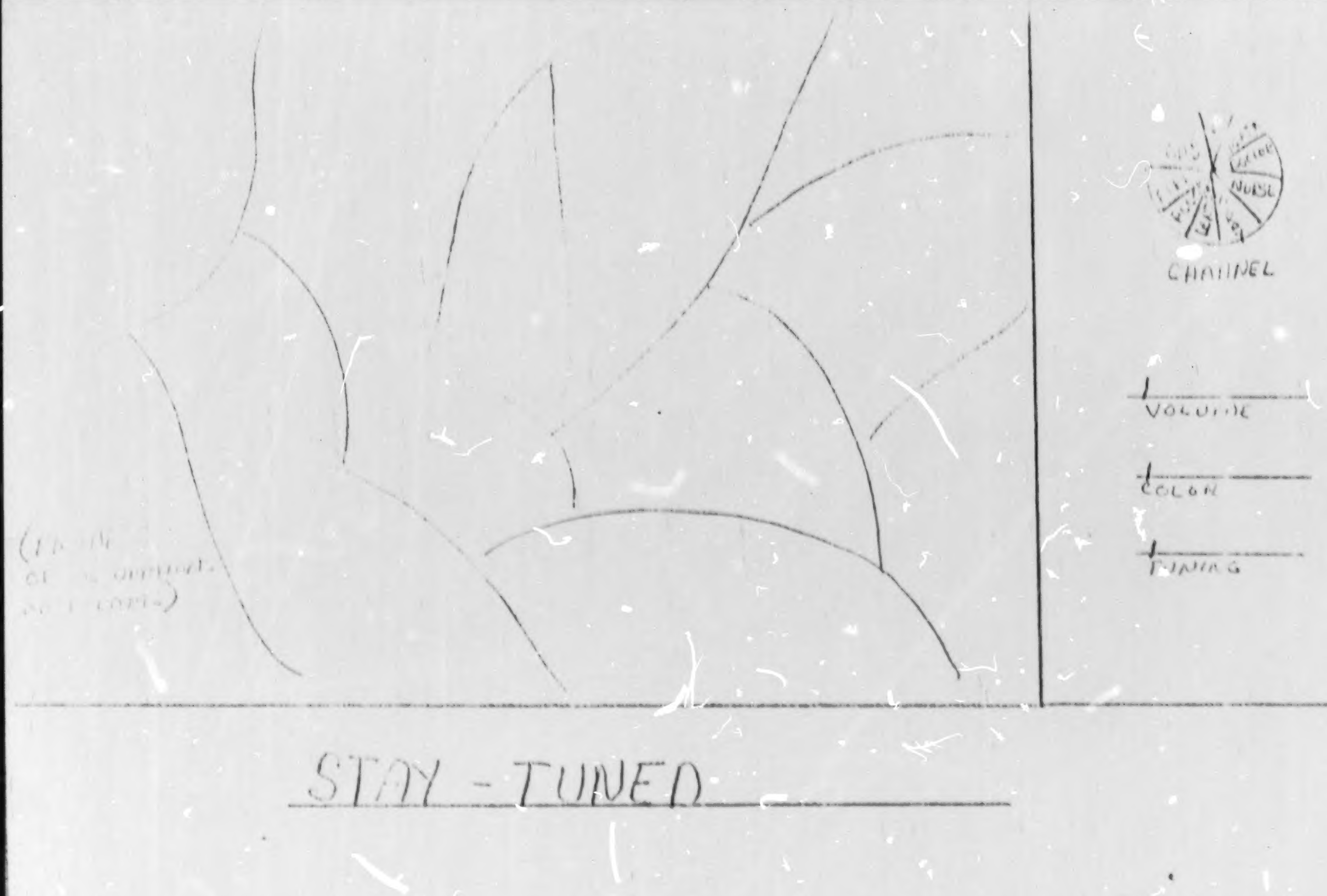
LOOK! INTO

THE

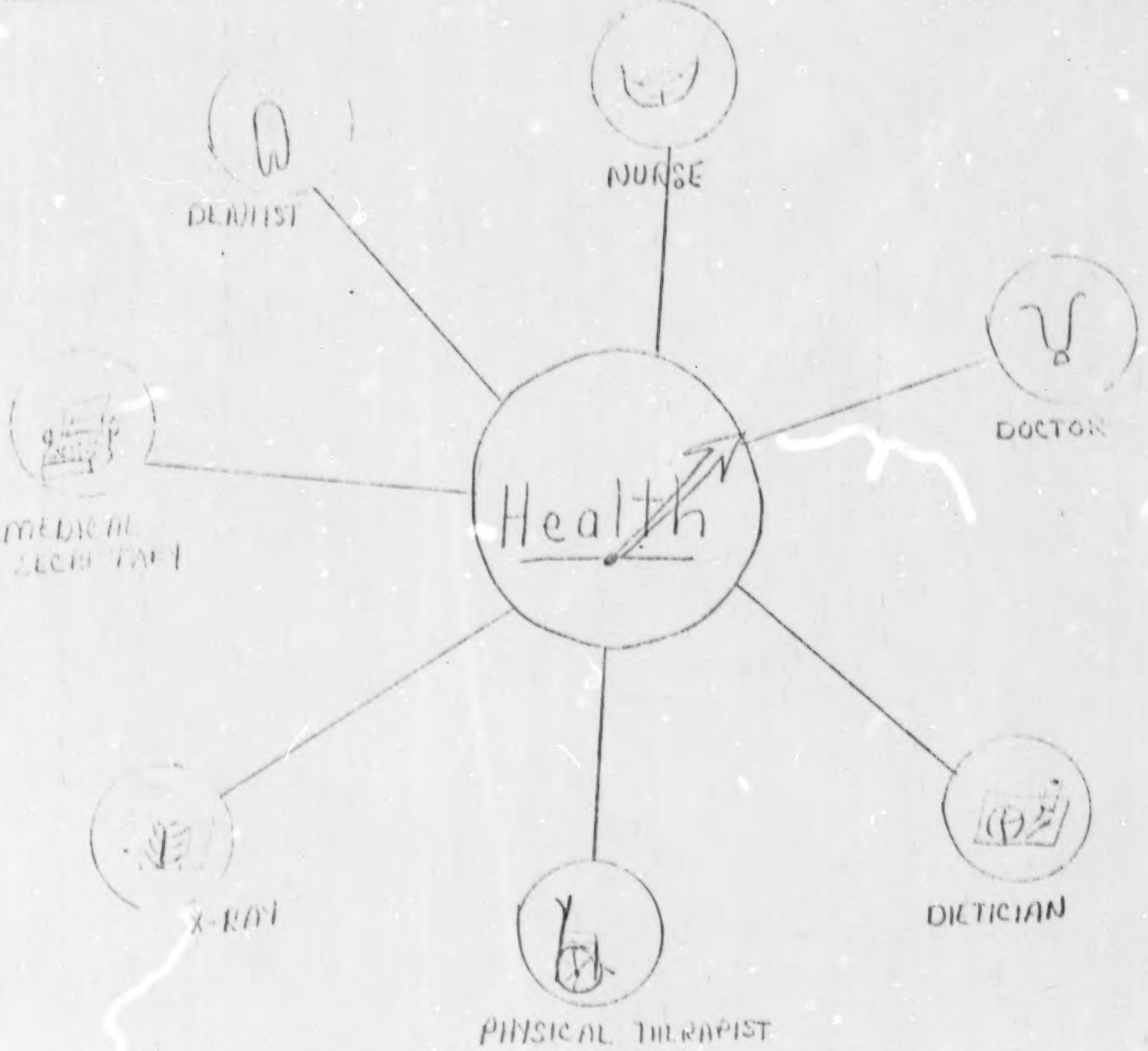

CAREERS
TRANSPORTATION
FINE ARTS
ETC.

FUTURE

Main Bulliten Board.
ATTention getter!


CHANNEL
VOLUME
COLOR
TUNING
STAY - TUNED

BEST COPY AVAILABLE


Health
DENTIST
NURSE
DOCTOR
MEDICAL SECRETARY
X-RAY
PHYSICAL THERAPIST
DIETICIAN

Exploring the ARTS

Art
Music
Writing
Dancing

Career Opportunities